9-8145-476-23

TM 9-8145-476-23

TECHNICAL MANUAL

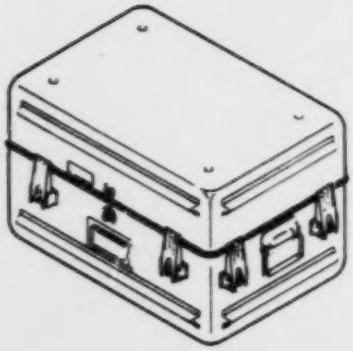
AVIATION UNIT AND INTERMEDIATE MAINTENANCE MANUAL

FOR

TARGET ACQUISITION DESIGNATION SIGHT/PILOT NIGHT VISION SENSOR ASSEMBLY (TADS/PNVS) SHIPPING AND STORAGE CONTAINERS

13083643, 13083644, 13083649

AH-64A ATTACK HELICOPTER



INTRODUCTION (P 1-1)

EQUIPMENT DESCRIPTION AND DATA (P 1-3)

AVIATION UNIT MAINTENANCE INSTRUCTIONS (P 2-1)

PREVENTIVE MAINTENANCE CHECKS AND SERVICES (P 2-2)

AVIATION UNIT MAINTENANCE PROCEDURES (P 2-4)

AVIATION INTERMEDIATE MAINTENANCE PROCEDURES (P 3-2)

ALPHABETICAL INDEX

This copy is a reprint which includes current pages from Changes 1-3.

READEX FICHE best copy available

HEADQUARTERS, DEPARTMENT OF THE ARMY
APRIL 1985

D 101.11:

Change)
)
No. 3)

HEADQUARTERS,
DEPARTMENT OF THE ARMY
Washington, D.C., *30 September 1988*

AVIATION INTERMEDIATE MAINTENANCE MANUAL
FOR
TARGET ACQUISITION DESIGNATION SIGHT (TADS) ASSEMLBY
SHIPPING AND STORAGE CONTAINERS,
13083610, 13083611, 13083613-19, 13083614,13083615,
13083617, 13083618, 13083619, 13083620, 13083621, 13083622,
13083624, 13083625, 13082385, AND 13082387
AND
PILOT NIGHT VISION SENSOR (PNVS) ASSEMBLY
SHIPPING AND STORAGE CONTAINERS,
13083608, 13083612, AND 13083616
(AH-64A ATTACK HELICOPTER)

TM 9-8145-476-23, 30 April 1985 is changed as follows:

1. Remove and insert pages as indicated below.

	Remove pages	Insert pages
List of Effective Pages	A/(B blank)	A/(B blank)
Chapter 1	1-1 and 1-2 1-11/(1-12 blank)	1-1 and 1-2 1-11/(1-12 blank)
Chapter 3	3-27 and 3-28 3-31 and 3-32	3-27 and 3-28 3-31 and 3-32
Appendix C	C-1 thru C-3/(C-4 blank)	C-1 thru C-3/(C-4 blank)

2. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

3. Retain these sheets in front of manual for reference purposes.

By Order of the Secretary of the Army:

CARL E. VUONO
General, United States Army
Chief of Staff

Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-32, Unit, Direct and General Support requirements for AH-64A Attack Helicopter(TADS).

Change)
)
No. 2)

HEADQUARTERS,
DEPARTMENT OF THE ARMY
Washington, D.C., *3 July 1987*

AVIATION INTERMEDIATE MAINTENANCE MANUAL
FOR
TARGET ACQUISITION DESIGNATION SIGHT (TADS) ASSEMLBY
SHIPPING AND STORAGE CONTAINERS,
13083610, 13083611, 13083613-19, 13083614,13083615,
13083617, 13083618, 13083619, 13083620, 13083621, 13083622,
13083624, 13083625, 13082385, AND 13082387
AND
PILOT NIGHT VISION SENSOR (PNVS) ASSEMBLY
SHIPPING AND STORAGE CONTAINERS,
13083608, 13083612, AND 13083616
(AH-64A ATTACK HELICOPTER)

TM 9-8145-476-23, 30 April 1985, is changed as follows:

1. Title is changed as shown above.

2. Remove and insert pages as indicated below.

	Remove pages	Insert pages
List of Effective Pages	A/(B blank)	A/(B blank)
Table of Contents	i and ii	i and ii
Chapter 1	1-1 and 1-2 1-9 and 1-10 1-11/(1-12 blank)	1-1 and 1-2 1-9 and 1-10 1-11/(1-12 blank)
Chapter 3	3-25 and 3-26	3-25 and 3-26
Appendix C	C-1 and C-2	C-1 and C-2

3. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

4. Retain these sheets in front of manual for reference purposes.

This publication has been printed by the UNITED STATES ARMY PUBLICATIONS CENTER, ST. LOUIS, MISSOURI, to meet your needs on a timely basis.

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

R. L. DILWORTH
Brigadier General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-32, Unit, Direct Support and General Support Maintnenance requirements for the Target Aquisition Designation Sight (TADS) Assembly.

TM 9-8145-476-23
C1

Change)
)
No. 1)

HEADQUARTERS,
DEPARTMENT OF THE ARMY
Washington, D.C., *12 November 1985*

AVIATION UNIT AND INTERMEDIATE
MAINTENANCE MANUAL
FOR
TARGET ACQUISITION DESIGNATION SIGHT (TADS) ASSEMBLY
SHIPPING AND STORAGE CONTAINERS,
13083610, 13083611, 13083613, 13083614, 13083615, 13083617,
13083618, 13083619, 13083620, 13083621, 13083622, 13083624,
13083625, 13083685, AND 13082387
AND
PILOT NIGHT VISION SENSOR (PNVS) ASSEMBLY
SHIPPING AND STORAGE CONTAINERS,
13083608, 13083612, AND 13083616
(AH-64A ATTACK HELICOPTER)

TM 9-8145-476-23, 30 April 1985, is changed as follows:

1. Remove and insert pages as indicated below.

Remove pages	Insert pages
	A/(B blank)
i and ii	i and ii
3-13 and 3-14	3-13 and 3-14
3-19 thru 3-22	3-19 thru 3-22
3-27 thru 3-34	3-27 thru 3-34
C-1 thru C-3/(C-4 blank)	C-1 thru C-3/(C-4 blank)

2. Delete part numbers from front cover.

3. New or changed text material is indicated by a vertical bar in the margin. An illustration change is indicated by a miniature pointing hand.

4. Retain this sheet in front of manual for reference purposes.

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

MILDRED E. HEDBERG
Brigadier General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-32, Organizational, Direct Support and General Support Maintenance requirements for the Target Aquisition Designation Sight (TADS) (AH-64 Attack Helicopter).

LIST OF EFFECTIVE PAGES

INSERT LATEST CHANGE PAGES. DESTROY SUPERSEDED PAGES.

NOTE: The portion of the text affected by the changes is indicated by a vertical line in the outer margins of the page. Changes to illustrations are indicated by miniature pointing hands. Changes to wiring diagrams are indicated by shaded areas.

Dates of issue for original and change pages are:

Original...0...30 April 1985
Change.....1...12 November 1985
Change.....2...3 July 1987
Change.....3...30 September 1988

TOTAL NUMBER OF PAGES IN THIS PUBLICATION IS 83, CONSISTING OF THE FOLLOWING:

Page No.	*Change No.
Title	0
a	0
b Blank	0
A	3
B Blank	3
i	2
ii - iii	0
1-0	0
1-1	2
1-2	3
1-3 - 1-7	0
1-8 Blank	0
1-9	2
1-10	0
1-11	3
1-12 Blank	0
2-1 - 2-10	0
3-1 - 3-5	0
3-6 Blank	0
3-7 - 3-13	0
3-14	1
3-15 - 3-18	0
3-19 - 3-22	1
3-23 - 3-25	0
3-26	2
3-27	0
3-28	3
3-29	0
3-30	1
3-31	3
3-32 - 3-33	0
3-34	1
3-35 - 3-36	0
A-1	0
A-2 Blank	0
B-1 - B-6	0
C-1	0
C-2	3
C-3	3
C-4 Blank	0
Glossary-1	0
Glossary-2 Blank	0
Index-1 - Index-2	0

*Zero in this column indicates an original page.

AVIATION UNIT AND INTERMEDIATE MAINTENANCE MANUAL FOR TARGET ACQUISITION DESIGNATION SIGHT (TADS) ASSEMBLY SHIPPING AND STORAGE CONTAINERS, 13083610, 13083611, 13083613, 13083613-19, 13083614, 13083615, 13083617, 13083618, 13083619, 13083620, 13083621, 13083622, 13083624, 13083625, 13083685, AND 13082387 AND PILOT NIGHT VISION SENSOR (PNVS) ASSEMBLY SHIPPING AND STORAGE CONTAINERS, 13083608, 13083612, AND 13083616 (AH-64A ATTACK HELICOPTER)

REPORTING ERRORS AND RECOMMENDING IMPROVEMENTS

You can help improve this manual. If you find any mistakes or if you find a way to improve the procedures, please let us know. Mail your letter, DA Form 2028 (Recommended Changes to Publications and Blank Forms), or DA Form 2028-2 direct to: Commander, U.S. Army Missile Command, ATTN: AMSMI-LC-ME-PM, Redstone Arsenal, Alabama 35898-5238. A reply will be furnished to you.

		Page
	HOW TO USE THIS MANUAL	ii
CHAPTER 1.	INTRODUCTION	1-1
Section I.	General Information	1-1
II.	Equipment Description and Data	1-3
CHAPTER 2.	AVIATION UNIT MAINTENANCE INSTRUCTIONS	2-1
Section I.	Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment	2-1
II.	Preventive Maintenance Checks and Services (PMCS)	2-2
III.	Aviation Unit Maintenance Procedures	2-4
CHAPTER 3.	AVIATION INTERMEDIATE MAINTENANCE INSTRUCTIONS	3-1
Section I.	Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment	3-1
II.	Aviation Intermediate Maintenance Procedures	3-2
APPENDIX A.	REFERENCES	A-1
APPENDIX B.	MAINTENANCE ALLOCATION CHART (MAC)	B-1
APPENDIX C.	EXPENDABLE SUPPLIES AND MATERIALS LIST	C-1
GLOSSARY		Glossary-1
ALPHABETICAL INDEX		Index-1

HOW TO USE THIS MANUAL

If you cannot find the information you are looking for, you cannot properly do your job. Take a few minutes to look through this manual. You will find it easier to use once you have become familiar with it.

Each chapter and section is set up to lead you through it step by step. First, take another look at the cover. You will see the chapter titles with black tabs on the right edge of the cover. This is to aid you in quickly locating the proper chapter or section of the manual. For example:

1. Look at the cover again and become familiar with each title.

2. Pick out the title of the chapter or section you want to check.

3. Bend the manual back as shown in the illustration so that the black tabs on the pages are visible. You can see that the black tabs on the pages line up with the black tabs on the cover.

4. Put your thumbnail on the black tab of the page that is lined up with the chapter title you want to find. Open the manual at that page and you should now have the first page of the chapter.

5. On the chapter page, you will see a listing of the sections in that chapter. Listed under the section titles is a listing of the tasks for that section. Find the task (by title) that you have been assigned. Now, look across from the task title and you will find the paragraph and page number for the task. Notice that the chapter number forms part of the page number.

6. Now that you have located the page number, turn to that page and review the task requirements before starting the procedures.

7. Did you notice that each task or job begins with an initial setup?

   a. INITIAL SETUP lists the configuration, test equipment, tools and special tools, materials/parts, military occupational specialty (MOS), references, safety instructions, condition equipment should be in, and general instructions for you to complete the task. FOLLOWUP lists the procedures to be performed after you have completed the basic task.

   b. Now, what exactly does INITIAL SETUP mean to you? The term "INITIAL SETUP" means, "DO THIS FIRST BEFORE STARTING THE TASK." Review one of the initial setup tables and become familiar with the requirements.

HOW TO USE THIS MANUAL (cont)

8. An explanation of the initial setup headings is presented below.

   a. Tools and Special Tools. Special tools needed to perform the task. Be sure to acquire all the tools before you start the task.

   b. Materials/Parts. Materials and parts needed to perform the task. Materials can be found in Appendix C. Next to the name of the material listed in the initial setup you will find an item number. This number matches the item number in column (1) of Appendix C. Be sure to acquire all the materials and parts before you start the task.

   c. Personnel Required. MOS required to do the task. This will also tell you the number of persons needed to perform the task.

9. You can also use the table of contents on page i of this manual to locate page numbers for chapters, sections, and the appendixes.

10. Let's see if you understand how to find a specific task. Suppose your supervisor wants you to replace the humidity indicator.

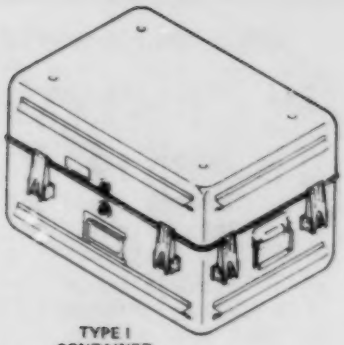
    Here's how you would find it:

    a. Obtain the correct TM for this task: TM 9-8145-476-23. Aviation Unit and Intermediate Maintenance Manual, Target Acquisition Designation Sight Assembly and Pilot Night Vision Sensor Assembly (TADS/PNVS) Shipping and Storage Containers is the correct manual. Look up this task.

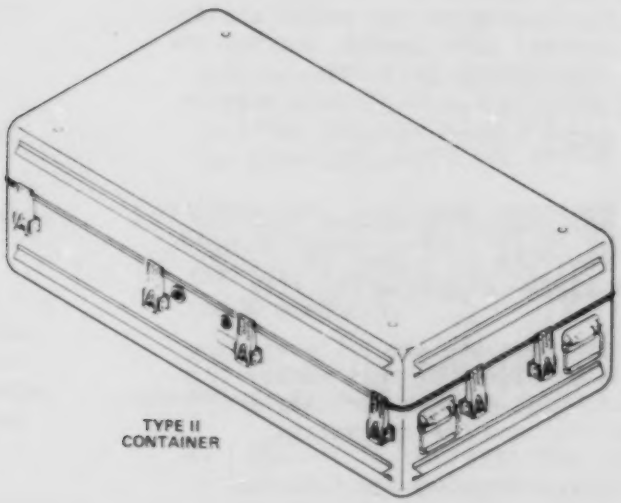
    b. Did you find the chapter title on the cover or did you use the table of contents? Remember replacement is an aviation intermediate maintenance task. So, if you located the Aviation Intermediate Maintenance Chapter, you are correct.

    c. Looking at the section titles listed in the maintenance chapter index, you should have located the page number for the maintenance procedures. Going to that page you found the section index and located the paragraph and page number of the replacement task.

11. Another approach would be to look in the alphabetical index in the rear of the manual. You would find the information listed in several places: "Humidity Indicator Replacement;" or "Replacement, Humidity Indicator."



TYPE I
CONTAINER



TYPE II
CONTAINER

TYPE III
CONTAINER

CHAPTER 1

INTRODUCTION

	Section	Page
General Information	I	1-1
Equipment Description and Data	II	1-3

Section I. GENERAL INFORMATION

Subject	Para	Page
Scope	1-1	1-1
Maintenance Forms, Records, and Reports	1-2	1-1
Destruction of Army Materiel to Prevent Enemy Use	1-3	1-2
Preparation for Storage or Shipment	1-4	1-2
Quality Assurance/Quality Control (QA/QC)	1-5	1-2
Official Nomenclature, Names, and Designations	1-6	1-2
Reporting Equipment Improvement Recommendations (EIR)	1-7	1-2

1-1. SCOPE

1-1

a. TYPE OF MANUAL

This manual provides aviation unit and intermediate maintenance instructions for shipping and storage containers.

b. MODEL NUMBER AND EQUIPMENT NAME

There are three types of reusable shipping and storage containers. Each type is modified to handle the line replaceable units (LRUs) that comprise the Target Acquisition Designation Sight (TADS) Assembly and Pilot Night Vision Sensor (PNVS) Assembly. Refer to table 1-2 for the container type and LRU configuration part number.

c. PURPOSE OF EQUIPMENT

The shipping and storage containers provide protection for the LRUs during shipping, storage, and handling.

1-2. MAINTENANCE FORMS, RECORDS AND REPORTS

1-2

Department of the Army forms and procedures used for equipment maintenance will be those prescribed by DA PAM 738-750, the Army Maintenance Management System (TAMMS). The DA PAM is published in the Maintenance Management UPDATE. Units may subscribe to Maintenance Management UPDATE by submitting a completed DA Form 12-13 to: Commander USAAG Publication Center, ATTN: AGDM-OD, 2800 Eastern Boulevard, Baltimore, MD 21220.

1-3. DESTRUCTION OF ARMY MATERIEL TO PREVENT ENEMY USE 1-3

Refer to TM 750-244-2 for information about destruction of Army materiel to prevent enemy use.

1-4. PREPARATION FOR STORAGE OR SHIPMENT 1-4

Preparation for the storage or shipment of the containers should be done per Department of Defense (DOD) Standards. There are no special handling procedures for the containers.

1-5. QUALITY ASSURANCE/QUALITY CONTROL (QA/QC) 1-5

Refer to FM 55-411 for information about Quality Assurance/Quality Control (QA/QC).

1-6. OFFICIAL NOMENCLATURE, NAMES, AND DESIGNATIONS 1-6

This listing includes nomenclature cross-references used in this manual. Refer to the glossary in the back of this manual for an explanation of other abbreviations.

Name/ Abbreviation	Official Nomenclature
Helicopter	AH-64A Attack Helicopter
PNVS	Pilot Night Vision Sensor Assembly AN/AAQ-11
TADS	Target Acquisition Designation Sight Assembly AN/ASQ-170

1-7. REPORTING EQUIPMENT IMPROVEMENT RECOMMENDATIONS (EIR) 1-7

If your containers need improvement, let us know. Send us an EIR. You, the user, are the only one who can tell us what you don't like about your equipment. Let us know why you don't like the design. Put it on an SF 368 (Quality Deficiency Report). Mail it to us at: Commander U.S. Army Missile Command, ATTN: AMSMI-QA-QM-QD, Redstone Arsenal, AL 35898-5290. We'll send you a reply.

Section II. EQUIPMENT DESCRIPTION AND DATA

	Para	Page
Equipment Purpose, Capabilities, and Features	1-8	1-3
Differences Between Models	1-9	1-7
Equipment Data	1-10	1-7
Safety, Care, and Handling	1-11	1-8
Equipment Configuration	1-12	1-10

1-8. EQUIPMENT PURPOSES, CAPABILITIES, AND FEATURES 1-8

The purposes, capabilities, and features described below are typical of container types I, II, and III.

a. PURPOSE

The shipping and storage containers are reusable containers rectangular in shape, made of an aluminum alloy material. Each container is designed to protect the equipment from shock, vibration, humidity, and water damage during transportation and storage.

1-8. EQUIPMENT PURPOSES, CAPABILITIES, AND FEATURES (cont) 1-8

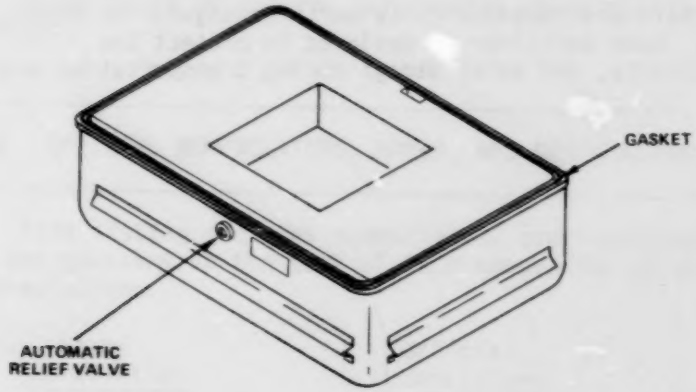
b. CAPABILITIES AND FEATURES

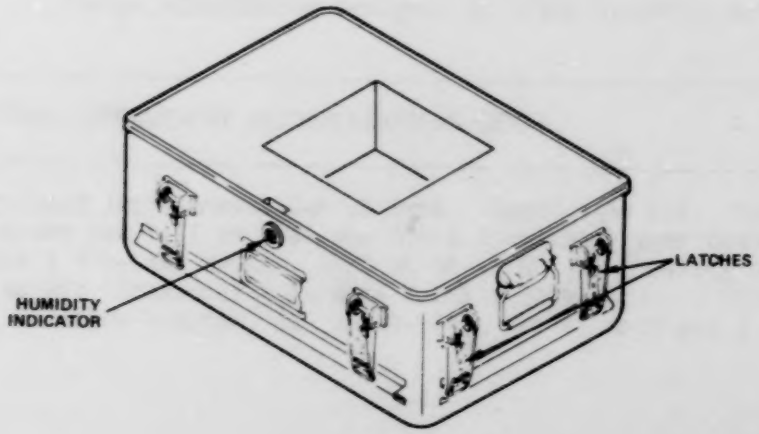
(1) Latches. Type I has eight latches, type II has 12 latches, and type III has 10 latches securing the lid to the container during storage. Release all latches when opening the container.

(2) Automatic relief valve. A two-way valve operates by vacuum or pressure to equalize pressure inside the container with atmospheric pressure outside the container. The vacuum rating is 3-1/2 psi and pressure rating is 2-1/2 psi. Internal pressure is equalized by pressing the manual release core.

(3) Humidity indicator. Humidity is registered to 50 percent and indicted by a lavender (or bluish) color in one or more of four circles. The circles indicate 20, 30, 40, or 50 percent humidity. After exposure to high humidity, the desiccant is replaced and circles return to former color (blacn numbers on a white background).

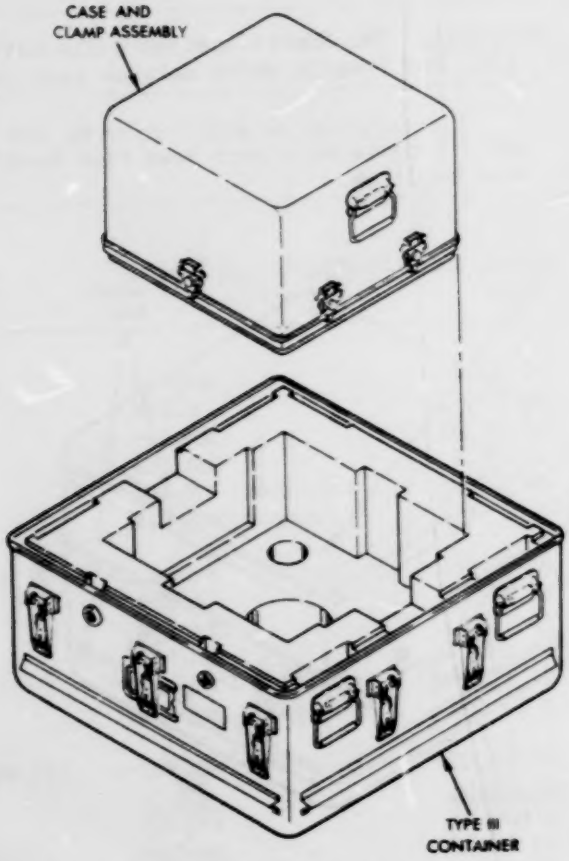
(4) Gasket. When closed, a rubber gasket waterproofs the container.





1-8. EQUIPMENT PURPOSES, CAPABILITIES, AND FEATURES (cont) 1-8

(5) Case and clamp assembly. Located in two of the seven Type III containers. Used to transport and store the Day Sensor and Night Sensor assemblies only.



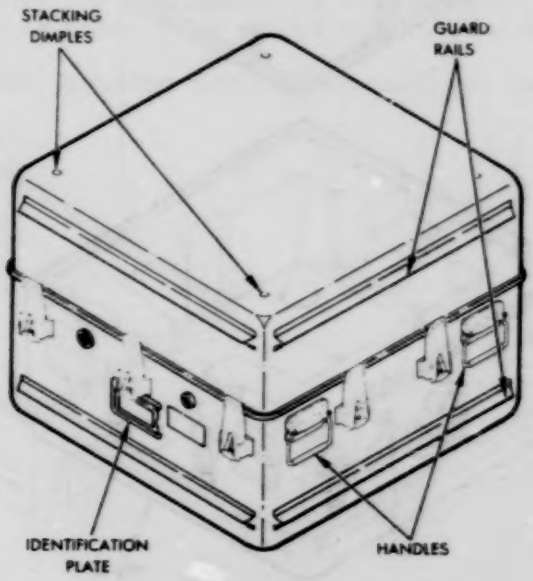
1-8. EQUIPMENT PURPOSES, CAPABILITIES, AND FEATURES (cont) 1

(6) Guard rails. Guard rails prevent damage to externally mounted components.

(7) Stacking dimples. Stacking dimples prevent containers from slipping during stacking for storage.

(8) Identification (ID) plate. The identification plate consists of information needed for basic container, LRU, and inserts which make up each container configuration.

(9) Handles. Type II and III containers each have four handles and Type I has two handles providing ease when handling.



TYPICAL CONTAINER

1-9. DIFFERENCES BETWEEN MODELS

1-9

Within container types there are no differences between models except for container cushions.

1-10. EQUIPMENT DATA

1-10

Refer to table 1-1 for physical data on containers.

Table 1-1. Physical Data

Type I	Length	29.44 in
	Width	18.60 in.
	Height	20.44 in
	Volume	4.95 cu ft
	Weight (unloaded)	34.00 lb
	Weight (loaded)	See ID plate
Type II	Length	56.69 in
	Width	30.44 in
	Height	18.20 in
	Volume	15.10 cu ft
	Weight (unloaded)	84.00 lb
	Weight (loaded)	See ID plate
Type III	Length	30.69 in
	Width	30.69 in
	Height	24.90 in
	Volume	11.04 cu ft
	Weight (unloaded)	56.00 lb
	Weight (loaded)	See ID plate

1-11. SAFETY, CARE, AND HANDLING

a. SAFETY

The following safety rules apply when using containers.

(1) Do not try to lift a container alone that requires a two-man lift.

(2) Do not use containers as work stands. They are not made to support your weight.

(3) Only stack same size containers.

(4) Stack containers maximum of four high. Ensure that stacking feet are firmly seated in the stacking dimples of the bottom container.

(5) A container can be damaged if lid is installed wrong. The lid is keyed to the lower half of the container. Several welds are located on rim of lid to prevent engagement of latches if lid is installed wrong.

b. CARE

With proper care, containers should last indefinitely. The following rules apply when caring for containers.

(1) Do not use containers as dunnage to support heavy items.

(2) Keep containers closed at all times when not in use. Excessive humidity will cause frequent changing of the desiccant bags.

(3) Replace instruction labels and stenciling when they become hard to read, (para 3-7 and 3-8).

(4) When gaskets become damaged, replace them immediately to preserve airtightness (para 3-12).

(5) Always replace broken or missing items immediately to maintain a serviceable condition.

c. HANDLING

The following rules apply when handling containers.

(1) Always use handles when lifting and carrying containers.

(2) Do not drag containers. It will damage paint finish and increase maintenance.

(3) Never throw or drop a container. It may damage the component inside.

(4) Always tie down containers being transported in an open body vehicle.

1-12. EQUIPMENT CONFIGURATION

Table 1-2 provides configuration information by container type. Column headings are explained below.

a. **ITEM NAME**

Common name of the item for which the container is used.

b. **ASSEMBLY**

Part number of container assembly.

c. **CONTAINER**

Part number of the container without cushions and desiccant.

d. **UPPER**

Part number of upper cushion.

e. **LOWER**

Part number of lower cushion.

f. **DESICCANT**

The quantity of bags of desiccant required.

1-12. EQUIPMENT CONFIGURATION (cont)

Table 1-2. Container Configuration*

Item Name	Assembly Part No.	Container Part No.	Upper Part No.	Lower Part No.	Bags of Desiccant
Type I					
Boresight assembly	3613	3643	3570	3569	4
	3613-19	3643	3570-2	3569-2	4
Power supply assembly	3614	3643	3572	3571	4
Laser electronics unit (LEU) assembly	3615	3643	3574	3573	4
PNVS electronic unit (PEU) assembly	3616	3643	3576	3575	4
TADS electronic unit (TEU) assembly	3618	3643	3580	3579	4
Laser transceiver unit (LTU) assembly	3619	3643	3582	3581	4
Television (TV) sensor assembly	3620	3643	3584	3583	4
Laser tracker receiver (LTR) assembly	3621	3643	3586	3585	4
TADS electronic control amplifier (ECA) assembly	3622	3643	3588	3587	4
Control panel assembly	3624	3643	3592	3591	4
Type II					
Optical relay column (ORC) assembly	3617	3644	3578	3577	8
Type III					
Night sensor assembly**	2385	3645	2389	2388	10
PNVS turret assembly	3608	3645	3561	3560	6
Day sensor assembly**	2387	3645	2389	2388	10
Night sensor shroud assembly	3610	3645	3565	3564	6
Day sensor shroud assembly	3611	3645	3632	3566	6
PNVS shroud assembly	3612	3645	3568	3567	6
Indirect view display (IVD) electronics assembly	3625	3645	3594	3593	6

*Precede all numbers with 1308 to complete the part number.
**A case and clamp assembly is provided as part of the container assembly.

CHAPTER 2

AVIATION UNIT MAINTENANCE INSTRUCTIONS

	Section	Page
Repair Parts; Special Tools; Test, Measurement, and and Diagnostic Equipment (TMDE); and Support Equipment	I	2-1
Preventive Maintenance Checks and Services (PMCS)	II	2-2
Aviation Unit Maintenance Procedures	III	2-4

Section I. REPAIR PARTS; SPECIAL TOOLS; TEST, MEASUREMENT, AND DIAGNOSTIC EQUIPMENT (TMDE); AND SUPPORT EQUIPMENT

	Para	Page
Common Tools and Equipment	2-1	2-1
Special Tools, TMDE, and Support Equipment	2-2	2-1
Repair Parts	2-3	2-1

2-1. COMMON TOOLS AND EQUIPMENT 2-1

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

2-2. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT 2-2

For authorized special tools and support equipment pertaining to aviation unit maintenance, refer to TM 9-8145-476-23P, Repair Parts and Special Tools List (RPSTL).

2-3. REPAIR PARTS 2-3

Repair parts are listed and illustrated in the RPSTL (TM 9-8145-476-23P) covering aviation unit maintenance for this equipment.

Section II. PREVENTIVE MAINTENANCE CHECKS AND SERVICES (PMCS)

	Para	Page
General	2-4	2-2
PMCS Procedures	2-5	2-2

2-4. GENERAL 2-4

To ensure that the shipping and storage containers are ready for use at all times, they must be checked at regular intervals. Upon completion of all maintenance tasks, complete the proper forms in accordance with DA Pam 738-750, The Army Maintenance Management System (TAMMS).

2-5. PMCS PROCEDURES 2-5

Table 2-1 provides PMCS information. Column headings are explained below.

a. ITEM NUMBER

Listed is the item number in order of performance regardless of interval. This column shall be used as a source of item numbers for the TM number column on DA Form 2404, Equipment Inspection and Maintenance Worksheet, in recording results of PMCS.

b. INTERVAL

The interval column is self-explanatory as indicated by the legend that precedes the table.

c. ITEM TO BE INSPECTED

This column lists items to be inspected.

d. PROCEDURES

This column contains a brief description of the procedure to be performed.

2-5. PMCS PROCEDURES (cont)

Table 2-1. Preventive Maintenance Checks and Services

Item No.	Interval 30 Days	Interval 60 Days	Item To Be Inspected	Procedure
1		X	Humidity indicator	Check humidity indicator 20, 30, 40, and 50 circles. Humidity indicator should be black numbers on a white background. If any of the background circles are lavender (or bluish) in color, replace all desiccant bags (para 3-13).
2	X		Automatic relief valve	Check screen for clogging with dust or dirt. Brush or vacuum foriegn matter off screen.
3	X		Container and case assembly gasket	Check for tears, gouges, or missing portions. Replace gasket (para 3-12).
4	X		Cushions	Check for tears, gouges, or missing cushions. If tears or gouges intersect LRU cutout or cushion is missing, replace cushion (para 3-14).
5	X		Container and case assembly labels and stenciling	Check for legibility. If not readable, replace label and/or stenciling (para 3-7 and 3-8).
6	X		Container	Check for scratches, chipped paint, or exposed metal. If necessary, touchup paint area (para 3-6).
7	X		Case assembly*	Check for scratches, chipped paint, or exposed metal. If necessary, touchup paint area (para 3-6).
8	X		Container latches	Check for loose, incorrect fitting latches. If necessary, tighten latches for proper fit (para 2-8).
9	X		Clamp assembly*	Check for loose or broken hardware. Tighten hardware and if necessary repair clamp assembly (para 3-15).
10	X		Mounting plate* assembly	Check for loose or broken hardware. Tighten hardware and if necessary replace mounting plate assembly (para 3-15).

*Pertains to configurations 13082385 and 13082387 only.

Section III. AVIATION UNIT MAINTENANCE PROCEDURES

	Para	Page
General	2-6	2-4
Container Cleaning	2-7	2-5
Container Latch Adjustment	2-8	2-9

2-6. GENERAL 2-6

This section provides corrective maintenance procedures specifically directed to aviation unit maintenance level personnel.

2-7. CONTAINER CLEANING

This task covers cleaning of:

Para	Item
1.	Container exterior
2.	Container interior
3.	Cushion cleaning
4.	Case and Clamp Assembly

INITIAL SETUP

Materials (appendix C)

Clean water
Liquid bleach (Item 3)
Wiping cloth (Item 7)
Liquid detergent (Item 11)
Pail (Item 14)
Flat paint brush (Item 15)

Personnel Required

68J Aircraft Fire Control Repairer

1. CONTAINER EXTERIOR CLEANING

WARNING

HEAVY OBJECT

- EXCESSIVE STRAIN CAN CAUSE SERIOUS INJURY.
- DON'T: ATTEMPT TO LIFT OR CARRY HEAVY OBJECTS ALONE.
- DO: GET HELP FOR LIFTING OR CARRYING OBJECTS WEIGHING MORE THAN 35 POUNDS.
- IF YOU EXPERIENCE A SUDDEN PAIN WHILE LIFTING OR DISCOMFORT AFTER LIFTING, GET MEDICAL HELP AT ONCE.

a. Remove all foreign matter from container surfaces.

(1) Using handle of flat paint brush, remove any caked-on mud.

(2) Using flat paint brush, clean dust and dirt particles from surface.

(3) Using flat paint brush, clean screen of automatic relief valve.

CAUTION

Do not allow water to enter opening in automatic relief valve. Damage to the valve may result.

b. Wash exterior of container.

(1) Using clean water and liquid detergent, wash all exterior surfaces with a wiping cloth.

(2) Using clean water, rinse wiping cloth, wring dry, and remove all soapy water from surfaces.

c. Allow container to air dry.

(1) Place container in a clean dry area.

(2) Turn container every 10 minutes exposing all sides to air until dry.

END OF TASK

2. CONTAINER INTERIOR CLEANING

WARNING

HEAVY OBJECT

- EXCESSIVE STRAIN CAN CAUSE SERIOUS INJURY.
- DON'T: ATTEMPT TO LIFT OR CARRY HEAVY OBJECTS ALONE.
- DO: GET HELP FOR LIFTING OR CARRYING OBJECTS WEIGHING MORE THAN 35 POUNDS.
- IF YOU EXPERIENCE A SUDDEN PAIN WHILE LIFTING OR DISCOMFORT AFTER LIFTING, GET MEDICAL HELP AT ONCE.

a. Press red button located in center of automatic relief valve and equalize pressure before opening container.

b. Unlatch all latches and open container.

NOTE

If container has case and clamp assembly packed inside, go to step 4 below.

c. Remove cushions from container.

(1) Remove all desiccant bags from container pockets.

(2) Grasp lower cushion at corner and pull inward towards center of container.

(3) Pull cushion up and out of container. Place on clean dry surface.

(4) Repeat steps (2) and (3) above for upper cushion.

d. Clean interior of container.

(1) Turn container top on its side, using a flat paint brush, brush out dust and dirt. Repeat for container bottom.

(2) Using clean water, rinse wiping cloth, wring dry, and wipe interior surfaces.

(3) For hard to remove dirt and stains, perform step e below.

CAUTION

Do not allow water to enter opening in automatic relief valve. Damage to the valve may result.

NOTE

If there is mold or mildew on interior surfaces of container, add 2 ounces of liquid bleach to detergent/water solution.

e. Wash interior of container.

(1) Using clean water and liquid detergent, wash all interior surfaces with a wiping cloth.

(2) Using clean water, rinse wiping cloth, wring dry, and remove all soapy water from container surfaces.

f. Place both parts of container in a clean dry area and allow to air dry.

g. Install cushions in container.

NOTE

Ensure that cutouts in upper and lower cushions mate and are properly alined.

(1) Set lower cushion inside bottom container.

(2) Evenly insert cushion approximately 1 inch into bottom container.

(3) Push cushion down into container.

(4) Install new desiccant bags in container pockets (para 3-13).

(5) Repeat steps (1) through (3) for upper cushion.

h. Close container and latch all latches.

END OF TASK

3. CUSHION CLEANING

WARNING

HEAVY OBJECT

- EXCESSIVE STRAIN CAN CAUSE SERIOUS INJURY.
- DON'T: ATTEMPT TO LIFT OR CARRY HEAVY OBJECTS ALONE.
- DO: GET HELP FOR LIFTING OR CARRYING OBJECTS WEIGHING MORE THAN 35 POUNDS.
- IF YOU EXPERIENCE A SUDDEN PAIN WHILE LIFTING OR DISCOMFORT AFTER LIFTING, GET MEDICAL HELP AT ONCE.

a. Remove cushions by performing steps 2a through 2c above.

b. Wash cushions.

(1) Mix liquid detergent and clean water in a container large enough to immerse one cushion.

(2) Immerse upper cushion in detergent and squeeze, working it up and down to remove dirt and stains.

CAUTION

Do not wring cushion. Tears or gouges may occur.

(3) Remove from water and squeeze cushion, until all excess soapy water is removed.

(4) Repeat steps (2) and (3) using clean water only until all traces of soap are removed.

(5) Repeat steps (1) through (4) for lower cushion.

c. Allow cushions to air dry.

CAUTION

Do not place cushions in container until completely dry to prevent mildew or other damage.

(1) Place cushions in a clean dry area.

(2) Turn cushions after 30 minutes to dry bottom.

d. Repeat step 2g (1) through (5) above to install cushions in container.

END OF TASK

4. CASE AND CLAMP ASSEMBLY CLEANING

a. Remove case and clamp assembly by grasping handles and pulling assembly up and out of container.

b. Unlatch all latches and open case assembly.

c. Clean interior of case and clamp assembly using step 2d above.

d. Close case assembly and latch all latches.

e. If you entered this task from step 2c above, return to that task.

END OF TASK

2-8. CONTAINER LATCH ADJUSTMENT

This task covers:

Para	Item	Para	Item
1.	Container latch check	3.	Container latch tightening
2.	Container latch loosening		

INTIIAL SETUP

Tools	Personnel Required
Aircraft armament repairman tool set	68J Aircraft Fire Control Repairer

NOTE

The following steps should be performed for each latch.

1. CONTAINER LATCH CHECK

a. If latch is popped open, close latch. If latch will not close or pops back open, loosen latch using step 2 below.

b. If latch is closed and fits loosely, tighten latch using step 3 below.

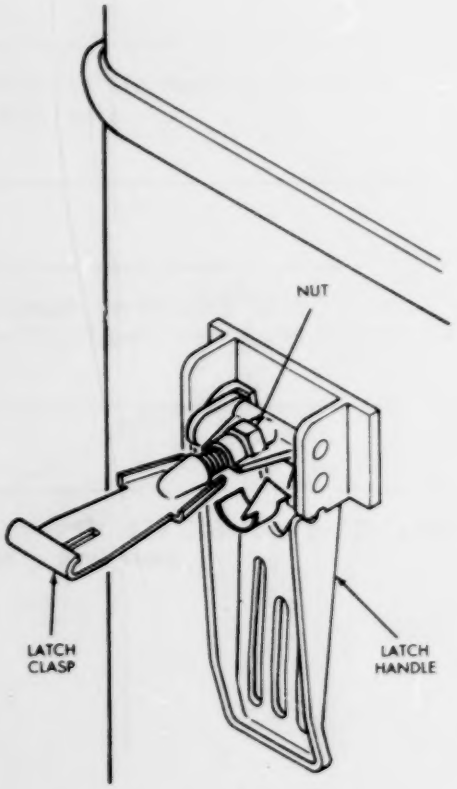
2. CONTAINER LATCH LOOSENING

a. Unlatch latch, allow latch handle to hang, and hold nut.

b. Turn latch clasp counterclockwise one or two turns.

c. Latch the latch.

d. Repeat step 1 above until latch closes snugly and properly.



2-8. CONTAINER LATCH ADJUSTMENT (cont)

3. CONTAINER LATCH TIGHTENING

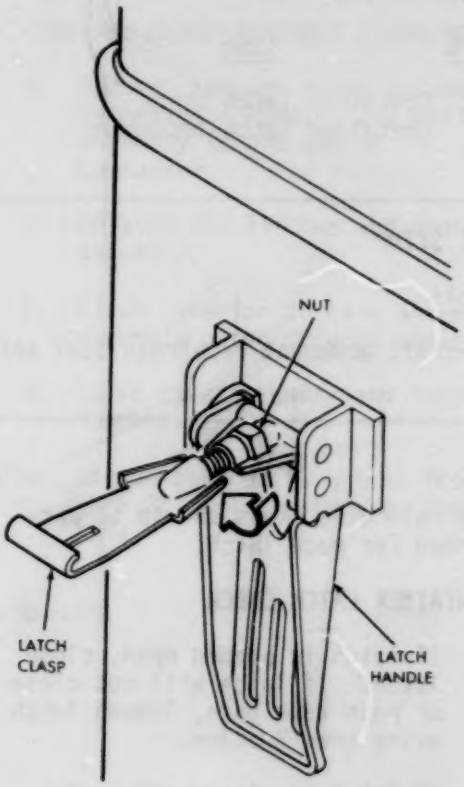
a. Unlatch latch, allow latch handle to hang, and hold nut.

b. Turn latch clasp clockwise one or two turns.

c. Latch the latch.

d. Repeat step 1 above until latch closes snugly and properly.

END OF TASK



CHAPTER 3

AVIATION INTERMEDIATE MAINTENANCE INSTRUCTIONS

	Section	Page
Repair Parts; Special Tools; Test, Measurement, and Diagnostic Equipment (TMDE); and Support Equipment	I	3-1
Aviation Intermediate Maintenance Procedures	II	3-2

Section I. REPAIR PARTS; SPECIAL TOOLS; TEST MEASUREMENT, AND DIAGNOSTIC EQUIPMENT (TMDE); AND SUPPORT EQUIPMENT

	Para	Page
Common Tools and Equipment	3-1	3-1
Special Tools, TMDE, and Support Equipment	3-2	3-1
Repair Parts	3-3	3-1

3-1. COMMON TOOLS AND EQUIPMENT 3-1

For authorized common tools and equipment, refer to the Modified Table of Organization and Equipment (MTOE) applicable to your unit.

3-2. SPECIAL TOOLS, TMDE, AND SUPPORT EQUIPMENT 3-2

For authorized special tools and support equipment pertaining to aviation intermediate maintenance, refer to TM 9-8145-476-23P, Repair Parts and Special Tools List (RPSTL).

3-3. REPAIR PARTS 3-3

Repair parts are listed and illustrated in the RPSTL (TM 9-8145-476-23P) covering aviation unit and intermediate maintenance for this equipment.

Section II. AVIATION INTERMEDIATE MAINTENANCE PROCEDURES

	Para	Page
General	3-4	3-2
Surface Preparation	3-5	3-3
Touchup Painting	3-6	3-4
Stencil Repair	3-7	3-7
Adhesive Label Replacement	3-8	3-11
Identification (ID) Plate Replacement	3-9	3-13
Humidity Indicator Replacement	3-10	3-15
Automatic Relief Valve Replacement	3-11	3-17
Gasket Replacement	3-12	3-19
Desiccant Replacement	3-13	3-23
Cushion Replacement	3-14	3-25
Case and Clamp Assembly Maintenance	3-15	3-27

3-4. GENERAL

3-4

This section provides corrective maintenance procedures specifically directed to aviation intermediate maintenance personnel for repair of the various container components.

3-5. SURFACE PREPARATION

3-5

This task covers surface preparation of structure and hardware for corrosion control.

INITIAL SETUP

Tools

Aircraft armament repairman tool set
Goggles
Rubber apron
Hard bristle brush

Materials (appendix C)

Cheesecloth pad (Item 6)
Rubber gloves (Item 12)
Abrasive paper, 400 grit (Item 16)
Pipe cleaner (Item 18)
Zinc chromate primer (Item 20)
Trichlorotrifluoroethane (Item 26)

Personnel Required

68J Aircraft Fire Control Repairer

1. Using abrasive paper, cheesecloth pad, and pipe cleaner, loosen and remove residue from structure and threaded hardware.

WARNING

TRICHLOROTRIFLUOROETHANE

- TOXIC, IRRITATING. CAN CAUSE BREATHING PROBLEMS, EYE DAMAGE.
- DON'T: LET IT GET ON SKIN, OR BREATHE VAPORS.
- DO: USE IN WELL-VENTILATED AREA, CLOSE CONTAINERS WHEN NOT USING. WEAR ACID-TYPE SAFETY GOGGLES, RUBBER GLOVES, AND RUBBER APRON.
- IF IT CONTACTS SKIN OR EYES, WASH AFFECTED AREAS WITH RUNNING WATER. GET MEDICAL HELP AT ONCE.
- IF YOU EXPERIENCE ANY BREATHING PROBLEMS, GET TO FRESH AIR AT ONCE.

2. Using cheesecloth pad, pipe cleaner, and trichlorotrifluoroethane, clean structure and threads.
3. Insert a clean pipe cleaner in threaded insert and verify cleanness.
4. Using hard bristle brush, clean zinc chromate primer residue from hardware.
5. Using cheesecloth pad and trichlorotrifluoroethane, clean hardware.
6. Install and prime hardware as specified in the appropriate maintenance task.

END OF TASK

3-6. TOUCHUP PAINTING

INITIAL SETUP

Tools

Goggles
Rubber apron

Materials (appendix C)

Artist brush, No. 9 (3) (Item 4)
Wiping cloth (2) (Item 7)
Forest green polyurethane coating (Item 8)
Primer coating (Item 9)
Rubber gloves (Item 12)
Flat paint brush, 1-inch (Item 15)
Abrasive paper, 400 grit (Item 16)
Wash primer (Item 19)
Masking tape (Item 24)
Trichloroethane (Item 25)

Personnel Required

68J Aircraft Fire Control Repairer

Special Environmental Conditions

Temperature between 50° and 90°F

General Safety Instructions

Paint in well-ventilated area

WARNING

HEAVY OBJECT

- EXCESSIVE STRAIN CAN CAUSE SERIOUS INJURY.
- DON'T: ATTEMPT TO LIFT OR CARRY HEAVY OBJECTS ALONE.
- DO: GET HELP FOR LIFTING OR CARRYING OBJECTS WEIGHING MORE THAN 35 POUNDS.
- IF YOU EXPERIENCE A SUDDEN PAIN WHILE LIFTING OR DISCOMFORT AFTER LIFTING, GET MEDICAL HELP AT ONCE.

1. Using abrasive paper, remove loose paint.

WARNING

TRICHLOROETHANE

- FLAMMABLE, TOXIC, IRRITATING. CAN CAUSE BREATHING PROBLEMS, EYE DAMAGE.
- AT 325°F, GIVES OFF PHOSGENE GAS, WHICH CAN CAUSE DEATH OR SERIOUS INJURY.
- DON'T: USE NEAR FLAMES OR SPARKS, LET IT GET ON SKIN, OR BREATHE VAPORS.
- DO: USE IN WELL-VENTILATED AREA, CLOSE CONTAINERS WHEN NOT USING. WEAR ACID-TYPE SAFETY GOGGLES, RUBBER GLOVES, AND RUBBER APRON.
- IF IT CONTACTS SKIN OR EYES, WASH AFFECTED AREAS WITH RUNNING WATER. GET MEDICAL HELP AT ONCE.
- IF YOU EXPERIENCE ANY BREATHING PROBLEMS, GET TO FRESH AIR AT ONCE.

2. Using clean wiping cloth moistened with trichloroethane, wipe sanded area. Allow to air dry.

3-6. TOUCHUP PAINTING (cont)

WARNING

PRIMER AND PAINT

- FLAMMABLE, TOXIC, CAN CAUSE BREATHING PROBLEMS.
- DON'T: USE NEAR FLAMES OR SPARKS OR BREATHE VAPORS.
- DO: USE IN WELL-VENTILATED AREA, CLOSE CONTAINERS WHEN NOT USING.
- IF YOU EXPERIENCE SHORTNESS OF BREATH, OR OTHER BREATHING PROBLEMS, GET TO FRESH AIR AT ONCE.

3. If bare metal is exposed, apply a thin coat of wash primer using artist brush. Allow to air dry.

4. Using artist brush, apply a thin coat of primer coating. Allow to air dry.

5. Using artist brush, apply a thin coat of forest green polyurethane coating. Allow to air dry.

END OF TASK

3-7. STENCIL REPAIR 3-7

This task covers two typical stenciling procedures. The method of stenciling is identical for all containers. The information being applied to each container is different.

Para	Item	Para	Item
1.	Minor stencil repair	2.	Major stencil repair

INITIAL SETUP

Tools

Goggles
Rubber apron

Materials (appendix C)

Artist brush, No. 9 (Item 4)
Stencil brush, 1-inch diameter (Item 5)
Wiping cloth (2) (Item 7)
Rubber gloves (Item 12)
Black stencil marking ink (Item 13)
Flat paint brush, 1-inch (Item 15)
Abrasive paper, 600 grit (Item 17)
Alphanumeric stencil sets (3), 0.50-inch, 0.38-inch, and 0.25-inch characters (Item 23)
Trichlorotrifluoroethane (Item 26)
Varnish (Item 27)

Personnel Required

68J Aircraft Fire control Repairer

Special Environmental Conditions

Temperature between 50° and 90°F
Humidity not to exceed 85 percent

General Safety Instructions

Paint in a well-ventilated area

WARNING

HEAVY OBJECT

- EXCESSIVE STRAIN CAN CAUSE SERIOUS INJURY.
- DON'T: ATTEMPT TO LIFT OR CARRY HEAVY OBJECTS ALONE.
- DO: GET HELP FOR LIFTING OR CARRYING OBJECTS WEIGHING MORE THAN 35 POUNDS.
- IF YOU EXPERIENCE A SUDDEN PAIN WHILE LIFTING OR DISCOMFORT AFTER LIFTING, GET MEDICAL HELP AT ONCE.

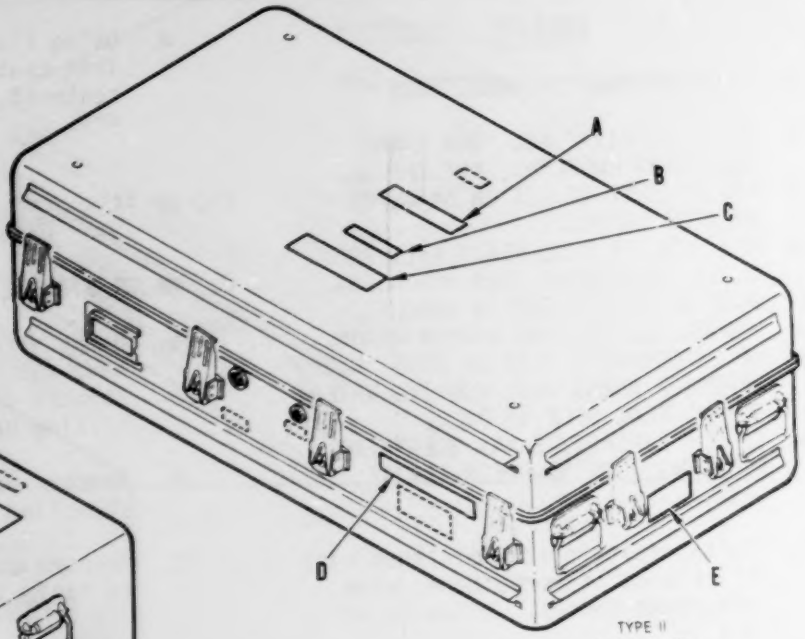
1. MINOR STENCIL REPAIR

a. Using abrasive paper, lightly sand area where stencil data is missing without hitting bare metal.

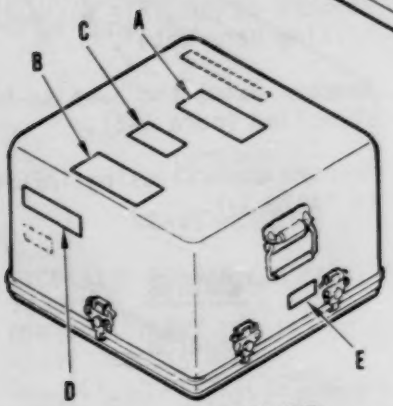
Table 3-1. Location and Stenciling Data

Container	A*	B*	C, D, & E*
Type I	REUSABLE CONTAINER DO NOT DESTROY	TWO MAN LIFT	WEIGHT LOADED - SEE IDENTIFICATION PLATE UNLOADED - 34 LB
Type II	REUSABLE CONTAINER DO NOT DESTROY	FOUR MAN LIFT	WEIGHT LOADED - SEE IDENTIFICATION PLATE UNLOADED - 84 LB
Type III	REUSABLE CONTAINER DO NOT DESTROY	FOUR MAN LIFT	WEIGHT LOADED - SEE IDENTIFICATION PLATE UNLOADED - 56 LB
Case and Clamp Assembly	REUSABLE CONTAINER DO NOT DESTROY TWO MAN LIFT WHEN LOADED	CAUTION Do not transport or store without shipping and storage container.	WEIGHT UNLOADED - 30 LB

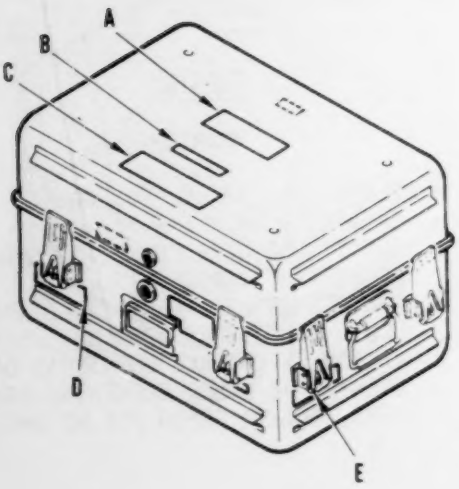
*Character height is 0.50 inch for locations A and B, 0.38 inch for locations C, D, and E.



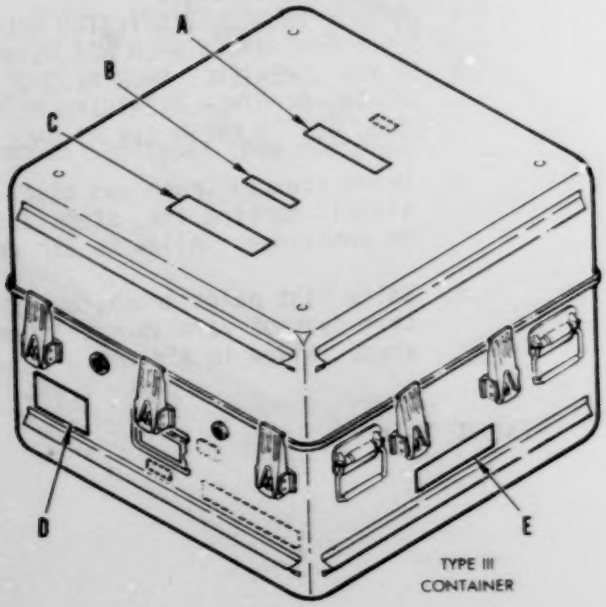
TYPE II
CONTAINER



CASE AND
CLAMP ASSEMBLY



TYPE I
CONTAINER



TYPE III
CONTAINER

3-9

WARNING

TRICHLOROTRIFLUOROETHANE

- TOXIC, IRRITATING. CAN CAUSE BREATHING PROBLEMS, EYE DAMAGE.
- DON'T: LET IT GET ON SKIN, OR BREATHE VAPORS.
- DO: USE IN WELL-VENTILATED AREA, CLOSE CONTAINERS WHEN NOT USING. WEAR ACID-TYPE SAFETY GOGGLES, RUBBER GLOVES, AND RUBBER APRON.
- IF IT CONTACTS SKIN OR EYES, WASH AFFECTED AREAS WITH RUNNING WATER. GET MEDICAL HELP AT ONCE.
- IF YOU EXPERIENCE ANY BREATHING PROBLEMS, GET TO FRESH AIR AT ONCE.

b. Using wiping cloth moistened with trichlorotrifluoroethane, wipe area just sanded. Allow to air dry.

c. Using artist brush and black stencil marking ink, restore characters by hand. Allow to air dry. Refer to table 3-1 for stencil information.

WARNING

VARNISH

- FLAMMABLE, TOXIC, CAN CAUSE BREATHING PROBLEMS.
- DON'T: USE NEAR FLAMES OR SPARKS OR BREATHE VAPORS.
- DO: USE IN WELL-VENTILATED AREA, CLOSE CONTAINERS WHEN NOT USING.
- IF YOU EXPERIENCE SHORTNESS OF BREATH, OR OTHER BREATHING PROBLEMS, GET TO FRESH AIR AT ONCE.

d. Using flat paint brush, apply thin coat of varnish over restored area. Allow to air dry.

END OF TASK

2. MAJOR STENCIL REPAIR

a. Using abrasive paper, lightly sand and remove as much of old stencil as possible without hitting bare metal.

b. Touchup paint the area to be stenciled (para 3-6).

c. Prepare stencil using information in table 3-1.

WARNING

VARNISH

- FLAMMABLE, TOXIC, CAN CAUSE BREATHING PROBLEMS.
- DON'T: USE NEAR FLAMES OR SPARKS OR BREATHE VAPORS.
- DO: USE IN WELL-VENTILATED AREA, CLOSE CONTAINERS WHEN NOT USING.
- IF YOU EXPERIENCE SHORTNESS OF BREATH, OR OTHER BREATHING PROBLEMS, GET TO FRESH AIR AT ONCE.

d. Using stencil brush and black stencil marking ink, stencil data on container. Allow to air dry.

e. Using flat paint brush, apply thin coat of varnish over stencil area. Allow to air dry.

END OF TASK

3-8. ADHESIVE LABEL REPLACEMENT 3-8

INITIAL SETUP

Tools

Goggles
Rubber apron

Materials (appendix C)

Isopropyl alcohol (Item 2)
Wiping cloth (Item 7)
Rubber gloves (Item 12)
Flat paint brush, 1-inch (Item 15)
Trichloroethane (Item 25)
Varnish (Item 27)

Personnel Required

68J Aircraft Fire Control Repairer

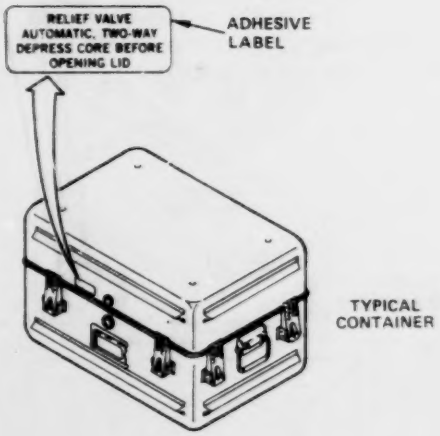
WARNING

HEAVY OBJECT

- EXCESSIVE STRAIN CAN CAUSE SERIOUS INJURY.
- DON'T: ATTEMPT TO LIFT OR CARRY HEAVY OBJECTS ALONE.
- DO: GET HELP FOR LIFTING OR CARRYING OBJECTS WEIGHING MORE THAN 35 POUNDS.
- IF YOU EXPERIENCE A SUDDEN PAIN WHILE LIFTING OR DISCOMFORT AFTER LIFTING, GET MEDICAL HELP AT ONCE.

REMOVAL

1. Remove old label from container.



WARNING

TRICHLOROETHANE

- FLAMMABLE, TOXIC, IRRITATING. CAN CAUSE BREATHING PROBLEMS, EYE DAMAGE.
- AT 325°F, GIVES OFF PHOSGENE GAS, WHICH CAN CAUSE DEATH OR SERIOUS INJURY.
- DON'T: USE NEAR FLAMES OR SPARKS, LET IT GET ON SKIN, OR BREATHE VAPORS.
- DO: USE IN WELL-VENTILATED AREA, CLOSE CONTAINERS WHEN NOT USING. WEAR ACID-TYPE SAFETY GOGGLES, RUBBER GLOVES, AND RUBBER APRON.
- IF IT CONTACTS SKIN OR EYES, WASH AFFECTED AREAS WITH RUNNING WATER. GET MEDICAL HELP AT ONCE.
- IF YOU EXPERIENCE ANY BREATHING PROBLEMS, GET TO FRESH AIR AT ONCE.

2. Wet wiping cloth with trichloroethane and remove all traces of old adhesive.

3. If necessary, touchup paint area where label was removed (para 3-6).

INSTALLATION

WARNING

ISOPROPYL ALCOHOL

- FLAMMABLE, TOXIC, IRRITATING. CAN CAUSE BREATHING PROBLEMS, EYE DAMAGE.
- DON'T: USE NEAR FLAMES OR SPARKS, LET IT GET IN EYES, OR BREATHE VAPORS.
- DO: USE IN WELL-VENTILATED AREA, CLOSE CONTAINERS WHEN NOT USING. WEAR ACID-TYPE SAFETY GOGGLES.
- IF IT CONTACTS EYES, WASH EYES WITH RUNNING WATER. GET MEDICAL HELP AT ONCE.
- IF YOU EXPERIENCE ANY BREATHING PROBLEMS, GET TO FRESH AIR AT ONCE.

4. Wet wiping cloth with isopropyl alcohol and clean label mounting area.

5. Peel backing off label and apply as shown.

6. Using flat paint brush, apply a coat of varnish over the label. Allow to air dry.

END OF TASK

3-9. IDENTIFICATION (ID) PLATE REPLACEMENT 3-9

This task covers a typical ID plate replacement procedure. Included are procedures for determining correct plate, removing old plate, and installing new plate. The procedures are identical for each container.

INITIAL SETUP

Personnel Required

68J Aircraft Fire Control Repairer

WARNING

HEAVY OBJECT

- EXCESSIVE STRAIN CAN CAUSE SERIOUS INJURY.
- DON'T: ATTEMPT TO LIFT OR CARRY HEAVY OBJECTS ALONE.
- DO: GET HELP FOR LIFTING OR CARRYING OBJECTS WEIGHING MORE THAN 35 POUNDS.
- IF YOU EXPERIENCE A SUDDEN PAIN WHILE LIFTING OR DISCOMFORT AFTER LIFTING, GET MEDICAL HELP AT ONCE.

REMOVAL

1. Lift retainer spring, grasp edge of ID plate, and remove from ID plate holder.

INSTALLATION

2. Determine from table 3-2, ID plate part number and obtain ID plate.
3. Lift retainer spring, insert new ID plate, and release retainer spring.

END OF TASK

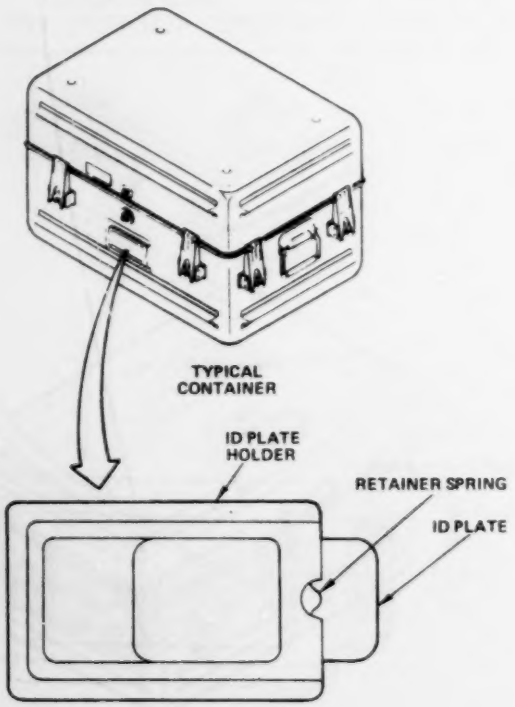
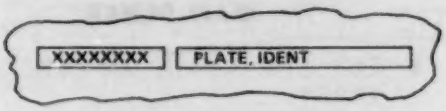
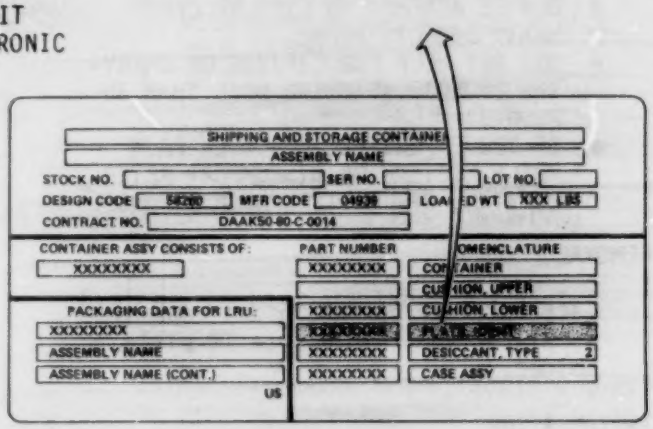


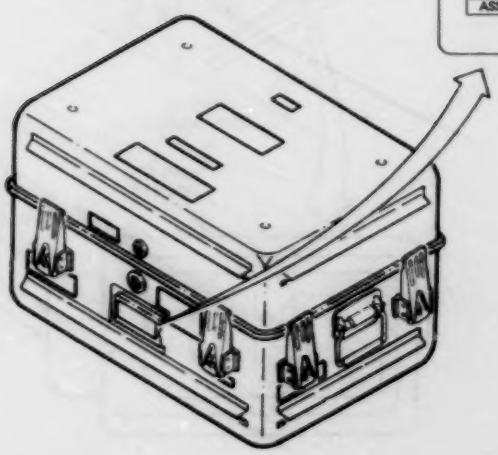
Table 3-2. ID Plate Part Numbers

Part No.	Assembly
13082384	NIGHT SENSOR ASSEMBLY-TADS
13082384-2	TURRET ASSEMBLY
13082384-3	DAY SENSOR SUBASSEMBLY-TADS
13082384-4	SHROUD ASSEMBLY, NIGHT SENSOR
13082384-5	SHROUD ASSEMBLY, DAY SENSOR
13082384-6	SHROUD ASSEMBLY-PNVS
13082384-7	BORESIGHT ASSEMBLY
13082384-8	POWER SUPPLY ASSEMBLY
13082384-11	LASER ELECTRONIC UNIT ASSEMBLY
13082384-12	PNVS ELECTRONIC UNIT ASSEMBLY
13082384-13	OPTICAL RELAY COLUMN ASSEMBLY
13082384-14	ELECTRONIC UNIT ASSEMBLY-TADS
13082384-15	LASER TRANSCEIVER UNIT ASSEMBLY
13082384-16	TELEVISION SENSOR ASSEMBLY
13082384-17	LASER TRACKER RECEIVER UNIT
13082384-18	AMPLIFIER ASSEMBLY, ELECTRONIC CONTROL TADS
13082384-21	CONTROL PANEL ASSEMBLY
13082384-22	ELECTRONIC ASSEMBLY, IVD





TYPICAL ID PLATE



TYPICAL CONTAINER

3-10. HUMIDITY INDICATOR REPLACEMENT 3-10

INITIAL SETUP

Tools

Aircraft armament repairman tool set
Goggles

Materials (appendix C)

Isopropyl alcohol (Item 2)
Wiping cloth (Item 7)

Personnel Required

68J Aircraft Fire Control Repairer

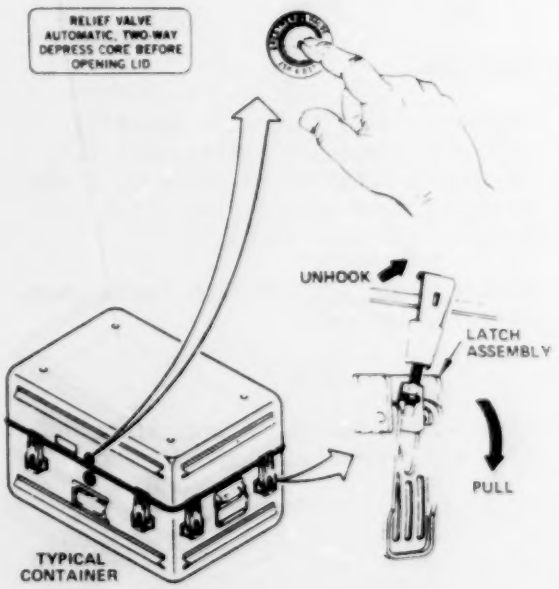
WARNING

HEAVY OBJECT

- EXCESSIVE STRAIN CAN CAUSE SERIOUS INJURY.
- DON'T: ATTEMPT TO LIFT OR CARRY HEAVY OBJECTS ALONE.
- DO: GET HELP FOR LIFTING OR CARRYING OBJECTS WEIGHING MORE THAN 35 POUNDS.
- IF YOU EXPERIENCE A SUDDEN PAIN WHILE LIFTING OR DISCOMFORT AFTER LIFTING, GET MEDICAL HELP AT ONCE.

REMOVAL

1. Press red button located in center of automatic relief valve and equalize pressure before opening container.
2. Unlatch all latches and open container.



3-10. HUMIDITY INDICATOR REPLACEMENT (cont) 3-10

3. Push cushion away from container exposing back of humidity indicator.

4. Remove humidity indicator by removing large hex nut.

WARNING

ISOPROPYL ALCOHOL

- FLAMMABLE, TOXIC, IRRITATING. CAN CAUSE BREATHING PROBLEMS, EYE DAMAGE.
- DON'T: USE NEAR FLAMES OR SPARKS, LET IT GET IN EYES, OR BREATHE VAPORS.
- DO: USE IN WELL-VENTILATED AREA, CLOSE CONTAINERS WHEN NOT USING. WEAR ACID-TYPE SAFETY GOGGLES.
- IF IT CONTACTS EYES, WASH EYES WITH RUNNING WATER. GET MEDICAL HELP AT ONCE.
- IF YOU EXPERIENCE ANY BREATHING PROBLEMS, GET TO FRESH AIR AT ONCE.

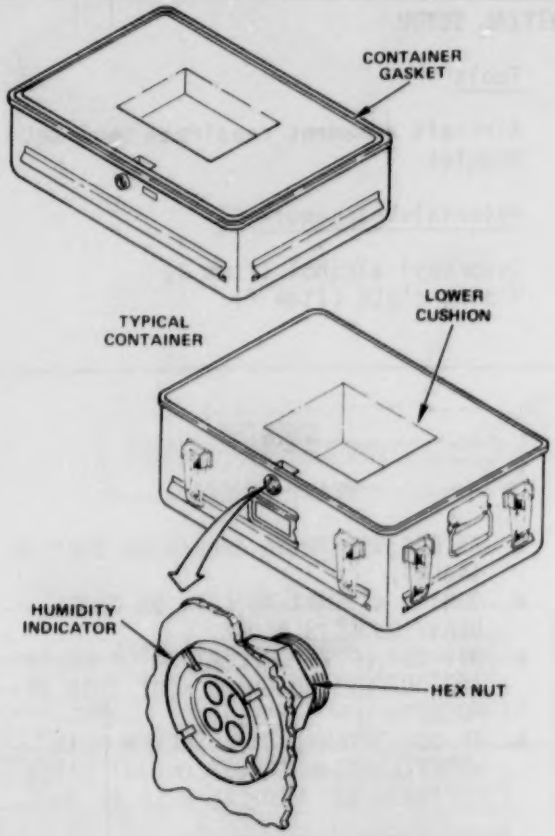
INSTALLATION

5. Check humidity indicator mounting hole for pieces of gasket material. If gasket material is present, clean mounting hole with wiping cloth dipped in isopropyl alcohol.

6. Remove large hex nut from replacement humidity indicator.

NOTE

Ensure that numerical indicators on face are properly oriented.



7. Place humidity indicator in mounting hole and install large hex nut.

8. Check container gasket around container top for tears, gouges, cracks, or missing portions (table 2-1). If necessary, replace gasket (para 3-12).

9. Close container and latch all latches.

END OF TASK

3-11. AUTOMATIC RELIEF VALVE REPLACEMENT 3-11

INITIAL SETUP

Tools

Aircraft armament repairman tool set
Goggles

Materials (appendix C)

Isopropyl alcohol (Item 2)
Wiping cloth (Item 7)

Personnel Required

68J Aircraft Fire Control Repairer

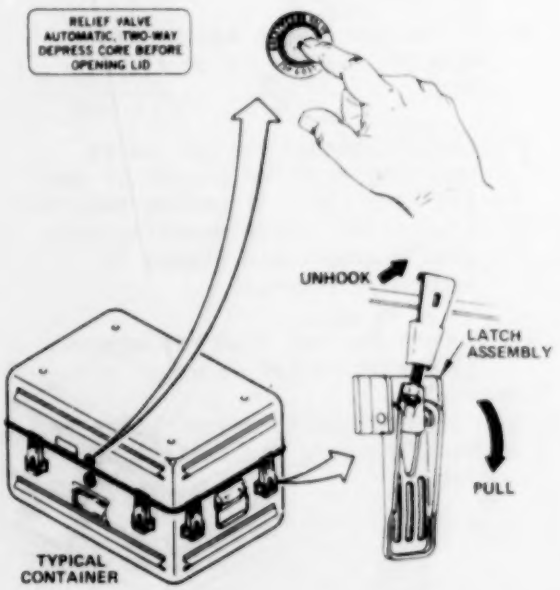
WARNING

HEAVY OBJECT

- EXCESSIVE STRAIN CAN CAUSE SERIOUS INJURY.
- DON'T: ATTEMPT TO LIFT OR CARRY HEAVY OBJECTS ALONE.
- DO: GET HELP FOR LIFTING OR CARRYING OBJECTS WEIGHING MORE THAN 35 POUNDS.
- IF YOU EXPERIENCE A SUDDEN PAIN WHILE LIFTING OR DISCOMFORT AFTER LIFTING, GET MEDICAL HELP AT ONCE.

REMOVAL

1. Press red button located in center of automatic relief valve and equalize pressure before opening container.
2. Unlatch all latches and open container.



3-11. AUTOMATIC RELIEF VALVE REPLACEMENT (cont) 3-11

3. Push cushion away from container, exposing back of automatic relief valve.

4. Remove automatic relief valve by removing hex nut.

INSTALLATION

WARNING

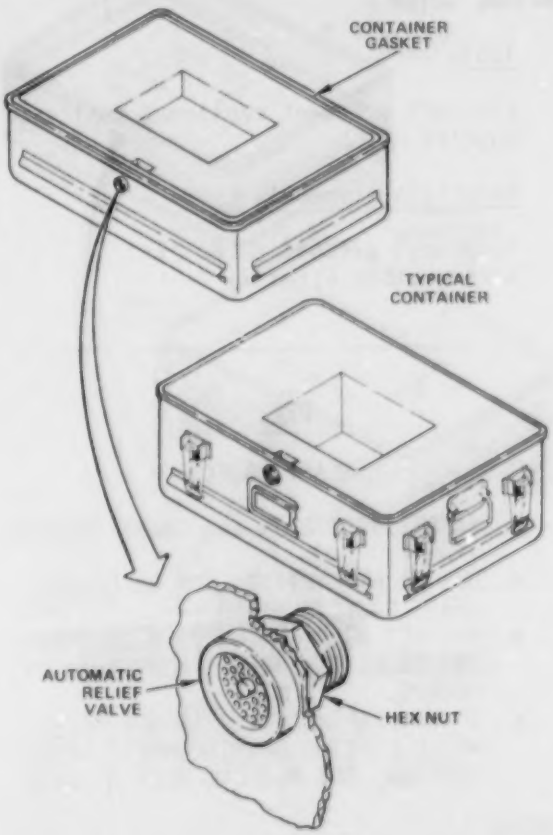
ISOPROPYL ALCOHOL

- FLAMMABLE, TOXIC, IRRITATING. CAN CAUSE BREATHING PROBLEMS, EYE DAMAGE.
- DON'T: USE NEAR FLAMES OR SPARKS, LET IT GET IN EYES, OR BREATHE VAPORS.
- DO: USE IN WELL-VENTILATED AREA, CLOSE CONTAINERS WHEN NOT USING. WEAR ACID-TYPE SAFETY GOGGLES.
- IF IT CONTACTS EYES, WASH EYES WITH RUNNING WATER. GET MEDICAL HELP AT ONCE.
- IF YOU EXPERIENCE ANY BREATHING PROBLEMS, GET TO FRESH AIR AT ONCE.

5. Check automatic relief valve mounting hole for pieces of gasket material. If gasket material is present, clean mounting hole with wiping cloth dipped in isopropyl alcohol.

6. Remove hex nut from replacement automatic relief valve.

7. Place automatic relief valve in mounting hole and install hex nut.



8. Check container gasket around container top for tears, gouges, cracks, or missing portions (table 2-1). If necessary, replace gasket (para 3-12).

9. Close container and latch all latches.

END OF TASK

3-12. GASKET REPLACEMENT

INITIAL SETUP

Tools

Aircraft armament repairman tool set
Goggles

Materials (appendix C)

Grey RTV adhesive (Item 1)
Wiping cloth (Item 7)
Rubber strip (Item 21)
Acetone (Item 28)
Paper, abrasive (Item 29)

Personnel Required

68J Aircraft Fire Control Repairer

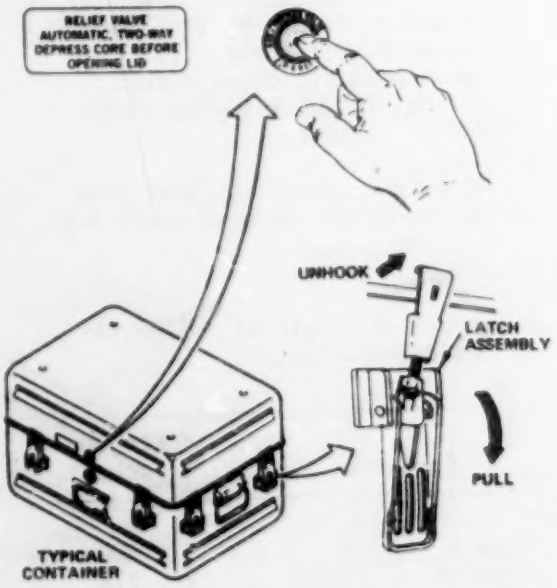
WARNING

HEAVY OBJECT

- EXCESSIVE STRAIN CAN CAUSE SERIOUS INJURY.
- DON'T: ATTEMPT TO LIFT OR CARRY HEAVY OBJECTS ALONE.
- DO: GET HELP FOR LIFTING OR CARRYING OBJECTS WEIGHING MORE THAN 35 POUNDS.
- IF YOU EXPERIENCE A SUDDEN PAIN WHILE LIFTING OR DISCOMFORT AFTER LIFTING, GET MEDICAL HELP AT ONCE.

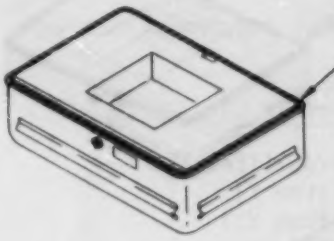
REMOVAL

1. Press red button located in center of automatic relief valve and equalize pressure before opening container.
2. Unlatch all latches and open container.



3. Starting at corner and using a small screwdriver, pry a 3 to 4-inch section of gasket (rubber strip) from gasket retaining slot.

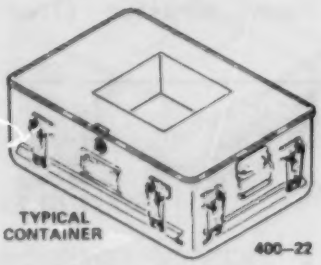
4. Remove gasket.



WARNING

ACETONE

- FLAMMABLE, TOXIC, IRRITATING. CAN CAUSE BREATHING PROBLEMS, EYE DAMAGE.
- DON'T: USE NEAR FLAMES OR SPARKS, LET IT GET ON SKIN, OR BREATHE VAPORS.
- DO: USE IN WELL-VENTILATED AREA, CLOSE CONTAINERS WHEN NOT USING. WEAR ACID-TYPE SAFETY GOGGLES, RUBBER GLOVES, AND RUBBER APRON.
- IF IT CONTACTS SKIN OR EYES, WASH AFFECTED AREAS WITH RUNNING WATER. GET MEDICAL HELP AT ONCE.
- IF YOU EXPERIENCE ANY BREATHING PROBLEMS, GET TO FRESH AIR AT ONCE.



5. Check gasket retaining slot for pieces of rubber strip. If rubber strip is present, clean gasket retaining slot with wiping cloth dipped in acetone.

6. If necessary, touch up paint area where gasket was removed (para 3-6).

INSTALLATION

7. Cut required length of rubber strip as indicated below.

Container	Length (inches)
Type I	100
Type II	176
Type III	126
Case and Clamp Assembly	126

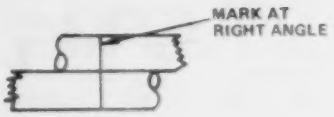
3-12. GASKET REPLACEMENT (cont)

8. Stretch the rubber strip slightly 1/8 to 1/4 inch.

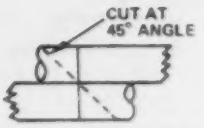
9. Temporarily position rubber strip on gasket retaining slot allowing ends to overlap as shown.

10. Mark both ends at right angles to container.

11. Remove rubber strip from gasket retaining slot and lay on flat surface. Overlap ends and aline marks as shown.



12. Cut both ends at approximately a 45-degree angle as shown.



13. Abrade with clean 180 grit abrasive sheet and wipe clean with acetone.

WARNING

SILICONE ADHESIVE

- FLAMMABLE, TOXIC, CAN CAUSE BREATHING PROBLEMS.
- DON'T: USE NEAR FLAMES OR SPARKS OR BREATHE VAPORS.
- DO: USE IN WELL-VENTILATED AREA, CLOSE CONTAINERS WHEN NOT USING.
- IF YOU EXPERIENCE SHORTNESS OF BREATH, OR OTHER BREATHING PROBLEMS, GET TO FRESH AIR AT ONCE.

14. Coat both ends of rubber strip with grey RTV adhesive and wait 60 seconds, or until surface is tacky.

15. Aline and join ends together as shown.

WARNING

ACETONE

- FLAMMABLE, TOXIC, IRRITATING. CAN CAUSE BREATHING PROBLEMS, EYE DAMAGE.
- DON'T: USE NEAR FLAMES OR SPARKS, LET IT GET ON SKIN, OR BREATHE VAPORS.
- DO: USE IN WELL-VENTILATED AREA, CLOSE CONTAINERS WHEN NOT USING. WEAR ACID-TYPE SAFETY GOGGLES, RUBBER GLOVES, AND RUBBER APRON.
- IF IT CONTACTS SKIN OR EYES, WASH AFFECTED AREAS WITH RUNNING WATER. GET MEDICAL HELP AT ONCE.
- IF YOU EXPERIENCE ANY BREATHING PROBLEMS, GET TO FRESH AIR AT ONCE.

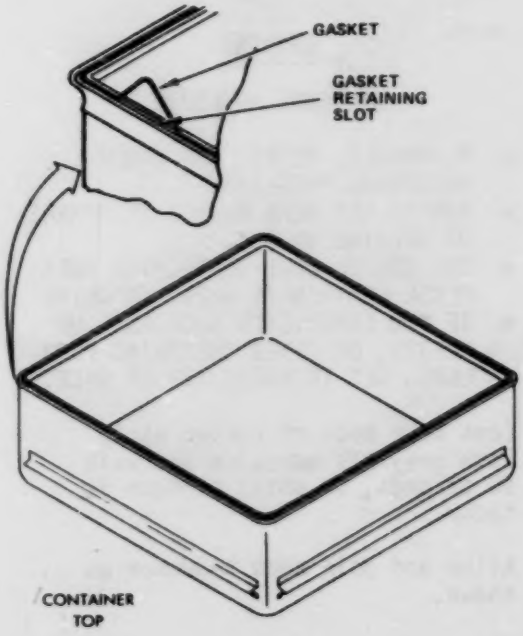
16. Clean excess grey RTV adhesive off gasket with wiping cloth dipped in acetone.

17. Allow grey RTV adhesive to cure for 30 hours.

18. Starting with joined ends in center front of container, press a 3 to 4-inch section of rubber strip firmly into gasket retaining slot until well seated.

19. Continue pressing rubber strip around container top perimeter until entire rubber strip is seated in gasket retaining slot.

20. Close container and latch all latches.



END OF TASK

3-13. DESICCANT REPLACEMENT

INITIAL SETUP

Materials (appendix C)

Desiccant bags (Item 10)

Personnel Required

68J Aircraft Fire Control Repairer

WARNING

HEAVY OBJECT

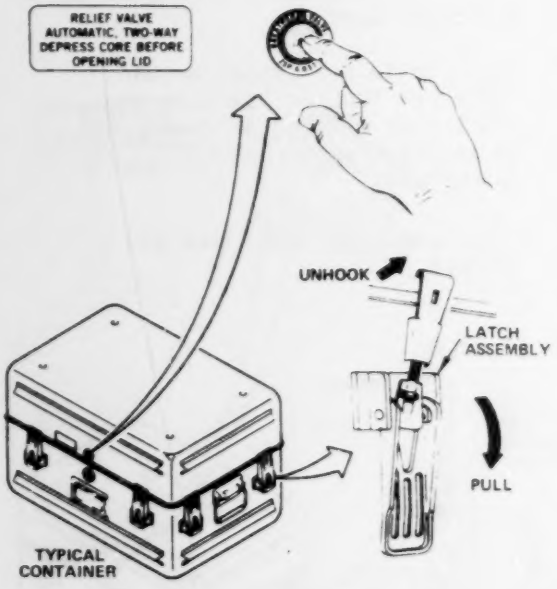
- EXCESSIVE STRAIN CAN CAUSE SERIOUS INJURY.
- DON'T: ATTEMPT TO LIFT OR CARRY HEAVY OBJECTS ALONE.
- DO: GET HELP FOR LIFTING OR CARRYING OBJECTS WEIGHING MORE THAN 35 POUNDS.
- IF YOU EXPERIENCE A SUDDEN PAIN WHILE LIFTING OR DISCOMFORT AFTER LIFTING, GET MEDICAL HELP AT ONCE.

NOTE

Number of desiccant bags required will vary. Refer to table 1-2 for quantity used.

REMOVAL

1. Press red button located in center of automatic relief valve and equalize pressure before opening container.
2. Unlatch all latches and open container.



3-13. DESICCANT REPLACEMENT (cont) 3-13

3. Push desiccant pocket away from container wall.

4. Remove desiccant bags from pocket.

5. Repeat steps 3 and 4 for remainder of desiccant bags.

INSTALLATION

6. Determine number of desiccant bags needed (table 1-2).

7. Push desiccant pocket away from container wall.

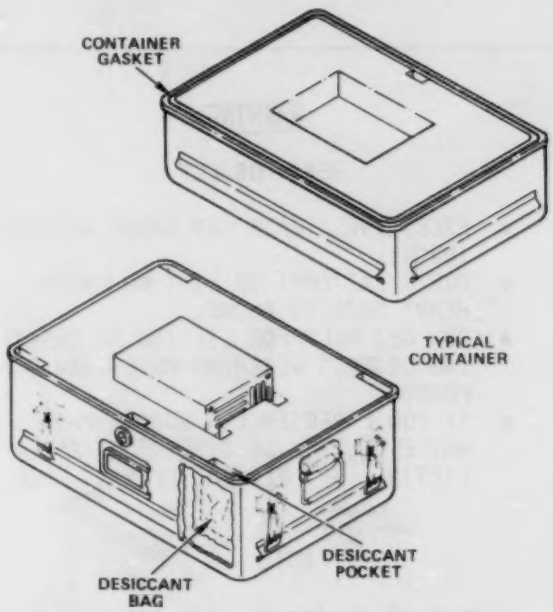
8. Install new desiccant bag into pocket.

9. Repeat steps 7 and 8 for remainder of desiccant bags.

10. Check container gasket around container top for tears, gouges, cracks, or missing portions. If necessary, replace gasket (para 3-12).

11. Close container and latch all latches.

END OF TASK



3-14. CUSHION REPLACEMENT

INITIAL SETUP

Personnel Required

68J Aircraft Fire Control Repairer

WARNING

HEAVY OBJECT

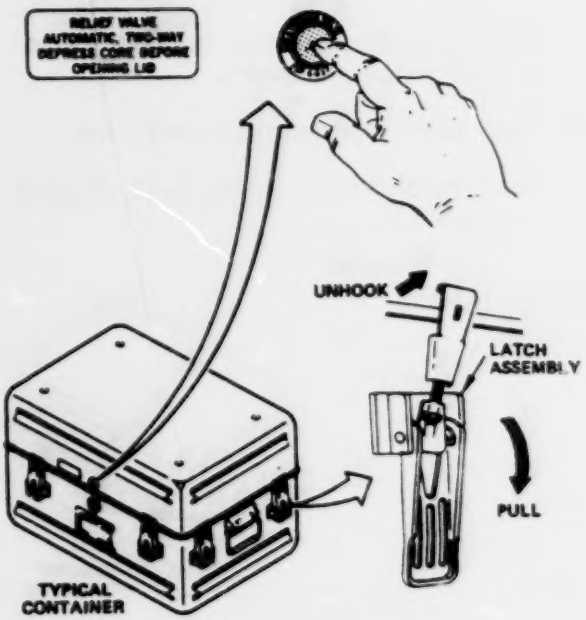
- EXCESSIVE STRAIN CAN CAUSE SERIOUS INJURY.
- DON'T: ATTEMPT TO LIFT OR CARRY HEAVY OBJECTS ALONE.
- DO: GET HELP FOR LIFTING OR CARRYING OBJECTS WEIGHING MORE THAN 35 POUNDS.
- IF YOU EXPERIENCE A SUDDEN PAIN WHILE LIFTING OR DISCOMFORT AFTER LIFTING, GET MEDICAL HELP AT ONCE.

REMOVAL

NOTE

This procedure replaces the lower cushion and can also be used to replace the upper cushion. Refer to paragraph 3-13 to replace desiccant as required.

1. Press red button located in center of automatic relief valve and equalize pressure before opening container.
2. Unlatch all latches and open container.



3. If replacing lower cushion, remove desiccant (para 3-13).

4. Grasp cushion at corner and pull inward towards center of container.

5. Pull cushion up and out of container. Place on clean dry surface.

INSTALLATION

6. Determine cushion part number and obtain new cushion (table 1-2).

7. If necessary, clean interior of container (para 2-7).

NOTE

Ensure that slot in cushion alines with humidity indicator and/or automatic relief valve when performing the following steps.

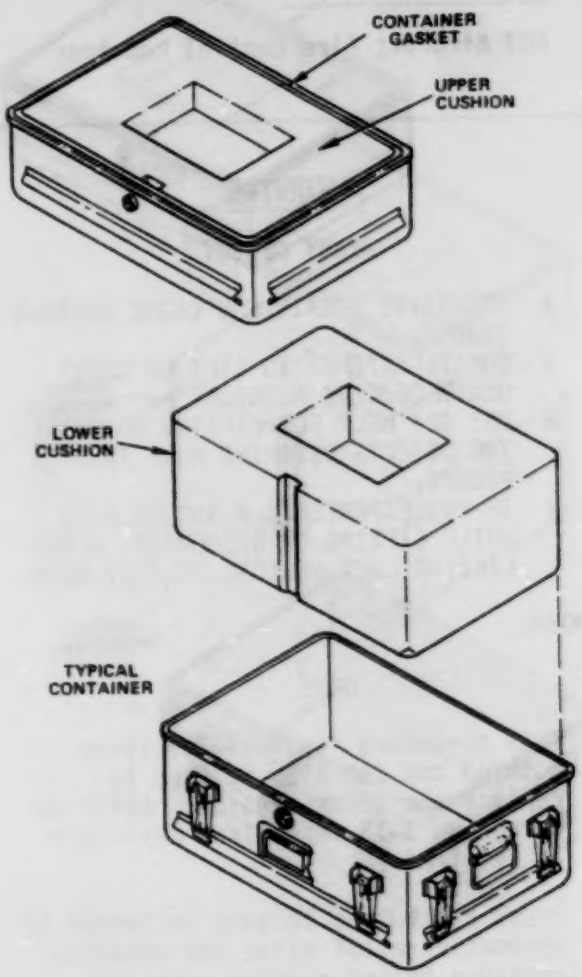
8. Set cushion inside container.

9. Evenly insert cushion approximately 1 inch into container.

10. Push cushion down into container.

11. Install desiccant (para 3-13 steps 6 through 11).

END OF TASK



3-15. CASE AND CLAMP ASSEMBLY MAINTENANCE 3-15

This task covers:

Para	Item
1.	Clamp assembly repair
2.	Mounting plate assembly replacement
3.	Rubber foot replacement

INITIAL SETUP

Tools

Aircraft armament repairman tool set

Materials (appendix C)

Zinc chromate primer (Item 20)
Self-locking nut (Item 22)

Personnel Required

68J Aircraft Fire Control Repairman

NOTE

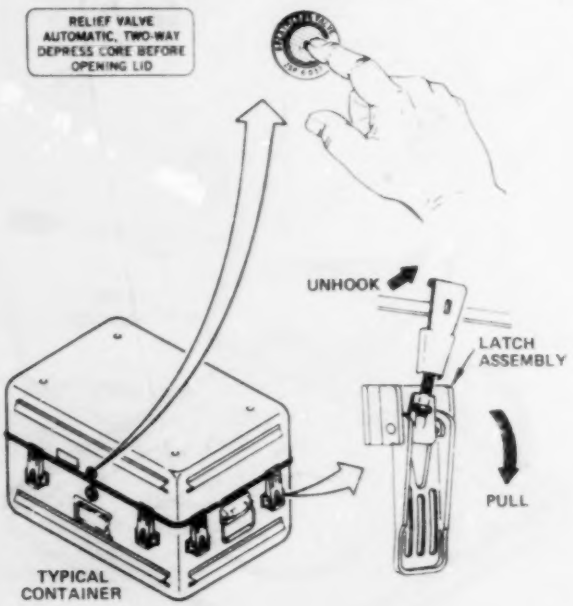
For general maintenance to case and clamp assembly, as performed on container itself, refer to paragraph 2-7 for cleaning, paragraph 3-6 for touchup painting, paragraph 3-7 for stencil repair, and paragraph 3-12 for gasket replacement.

1. CLAMP ASSEMBLY REPAIR

WARNING

HEAVY OBJECT

- EXCESSIVE STRAIN CAN CAUSE SERIOUS INJURY.
- DON'T: ATTEMPT TO LIFT OR CARRY HEAVY OBJECTS ALONE.
- DO: GET HELP FOR LIFTING OR CARRYING OBJECTS WEIGHING MORE THAN 35 POUNDS.
- IF YOU EXPERIENCE A SUDDEN PAIN WHILE LIFTING OR DISCOMFORT AFTER LIFTING, GET MEDICAL HELP AT ONCE.



REMOVAL

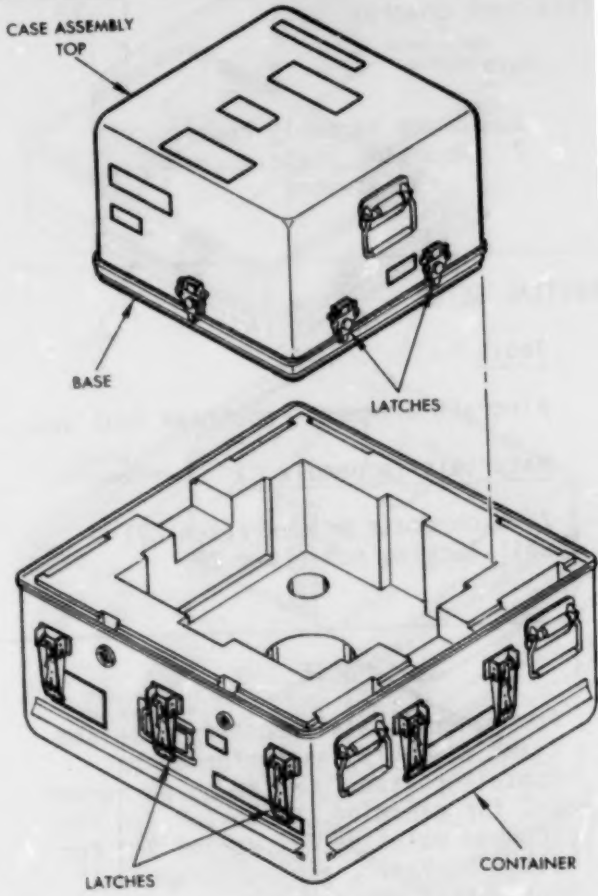
a. Press red button located in center of automatic relief valve and equalize pressure before opening container.

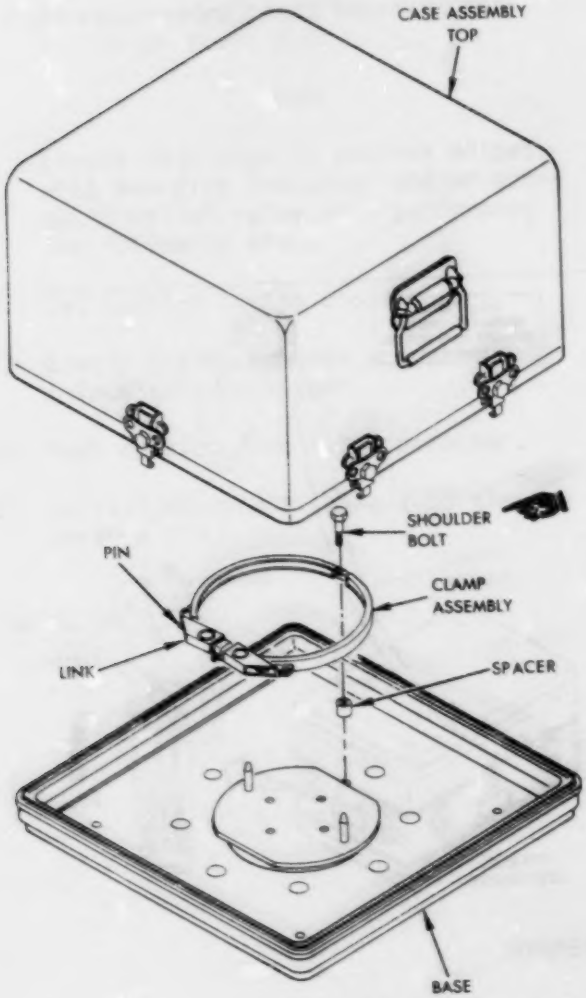
3-15. CASE AND CLAMP ASSEMBLY MAINTENANCE (cont)

b. Unlatch latches and open container.

c. Remove case assembly from container.

d. Unlatch latches on case assembly, remove case assembly top, and set top aside.



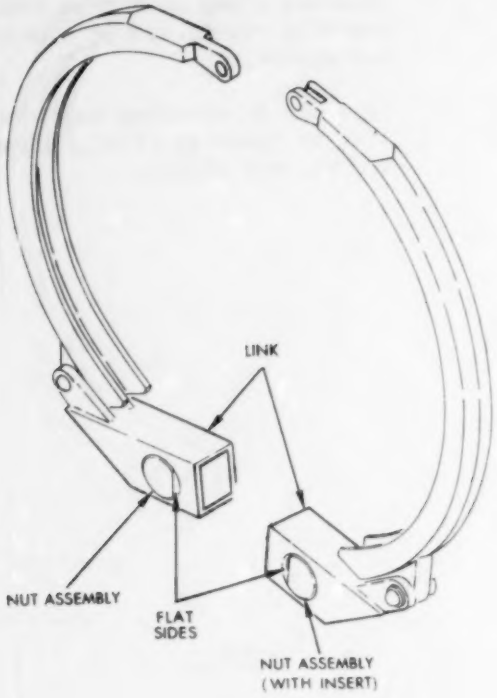


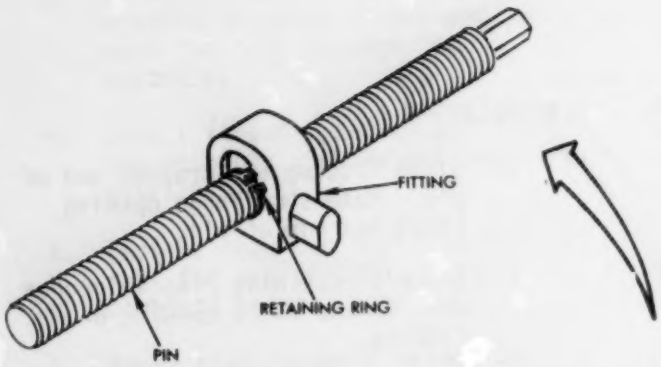
e. Unscrew and remove pin from links.

f. Remove sholder bolt securing clamp assembly and spacer to base. Loosen pin and lift out clamp assembly and spacer.

3-15. CASE AND CLAMP ASSEMBLY MAINTENANCE (cont)

g. Remove nut assemblies from links.

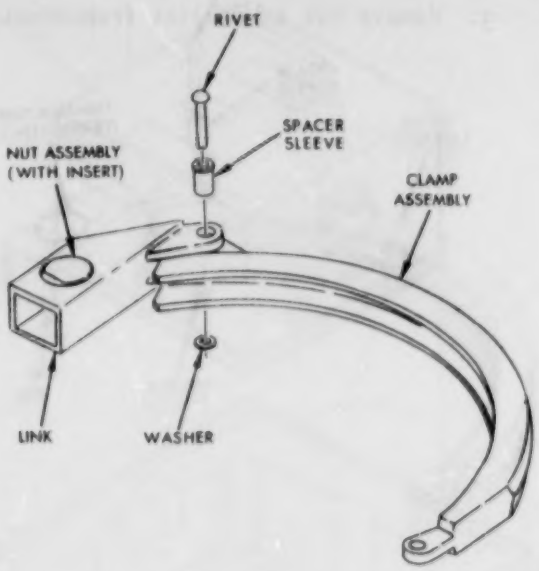


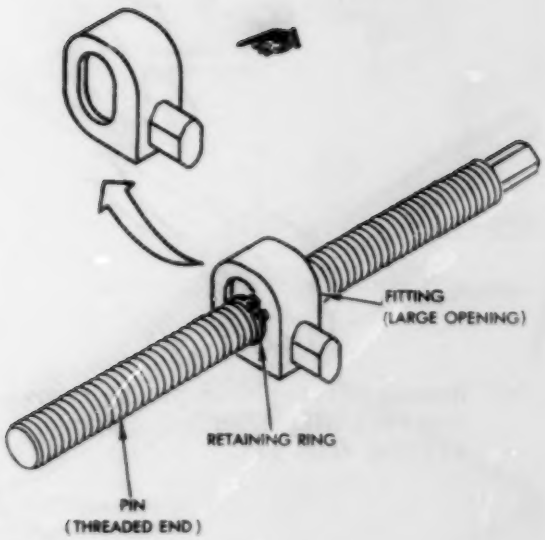


h. Remove fitting from pin by removing retaining ring and slide fitting from pin.

i. Separate clamp half from link by removing rivet, spacer sleeve, and washer.

j. Separate other clamp half from link by removing rivet, spacer sleeve, and washer.





INSTALLATION

k. Slide fitting on threaded end of pin. Make sure large opening faces hex end of pin.

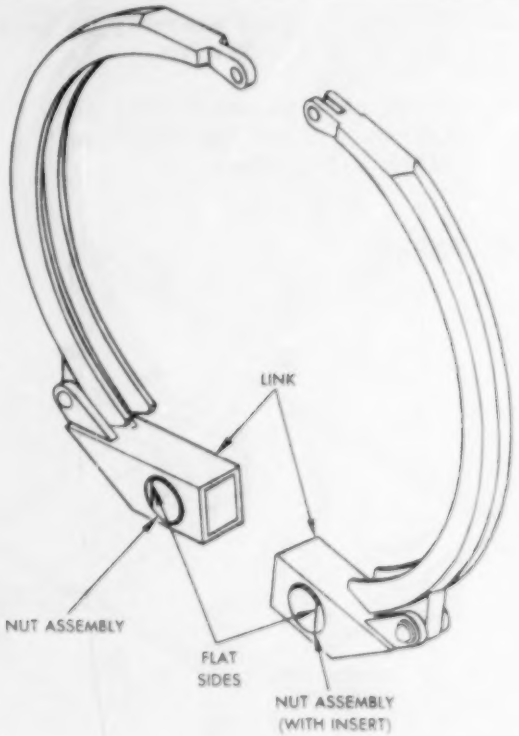
l. Install retaining ring in groove next to the small opening of fitting.

m. Install spacer sleeve, rivet, and washer to connect clamp half to link.

n. Install other spacer sleeve, rivet, and washer to connect clamp half to other link.

o. Install nut assembly without insert into left link. Flat side of nut assembly should be facing center of pin.

p. Install nut assembly with insert into other link. Flat side of nut assembly should be facing center of pin.



q. Slide bolt end of pin into nut assembly without insert and turn until bolt is through nut assembly.

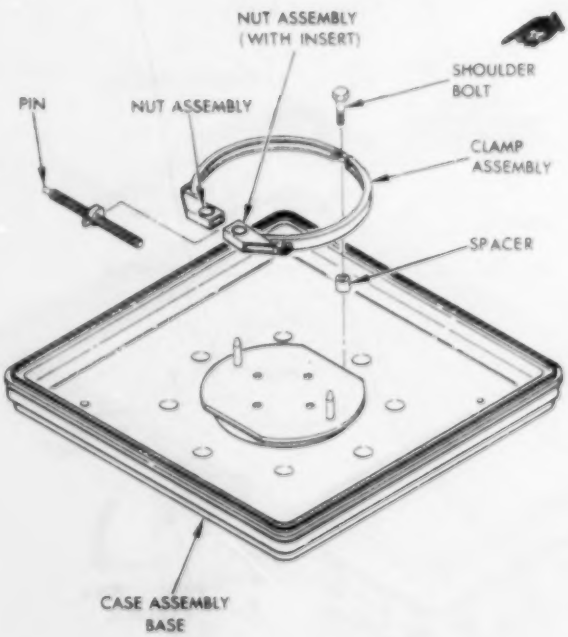
r. Insert threaded end of pin into nut assembly with insert and turn until tight.

s. Prepare shoulder bolt and surface area for application of zinc chromate primer (para 3-5).

t. Apply zinc chromate primer to screw and surface area.

u. Place spacer and clamp assembly on case assembly base and secure with screw.

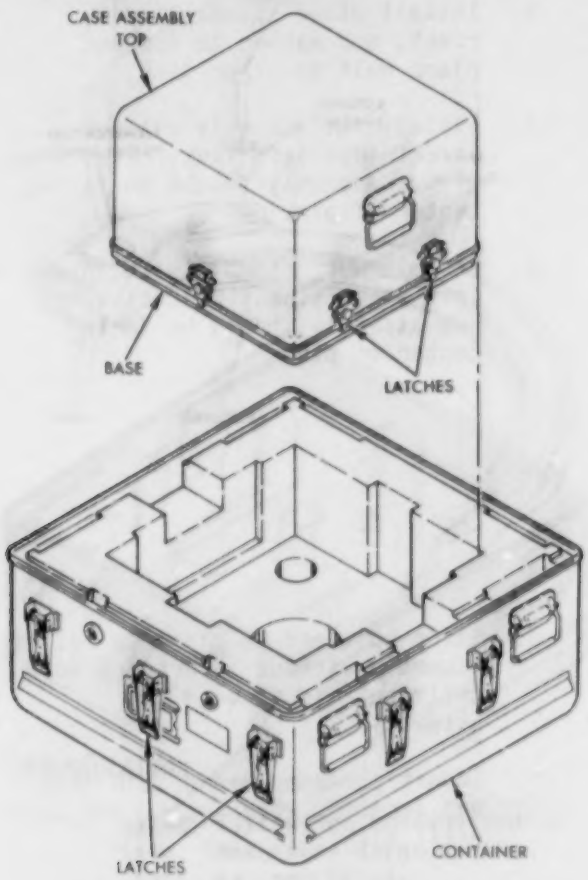
v. Torque pin to 100 in-lb.

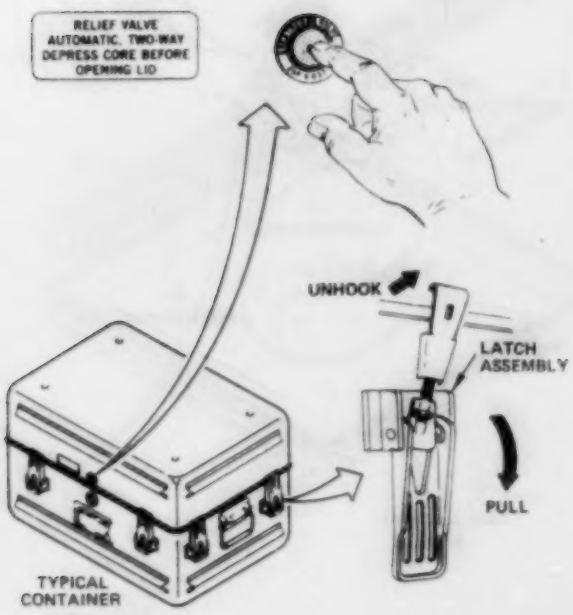


w. Put top of case assembly on base and latch all latches.

x. Slide case assembly into container. Close container and latch all latches.

END OF TASK





2. MOUNTING PLATE ASSEMBLY REPLACEMENT

REMOVAL

a. Press red button located in center of automatic relief valve and equalize pressure before opening container.

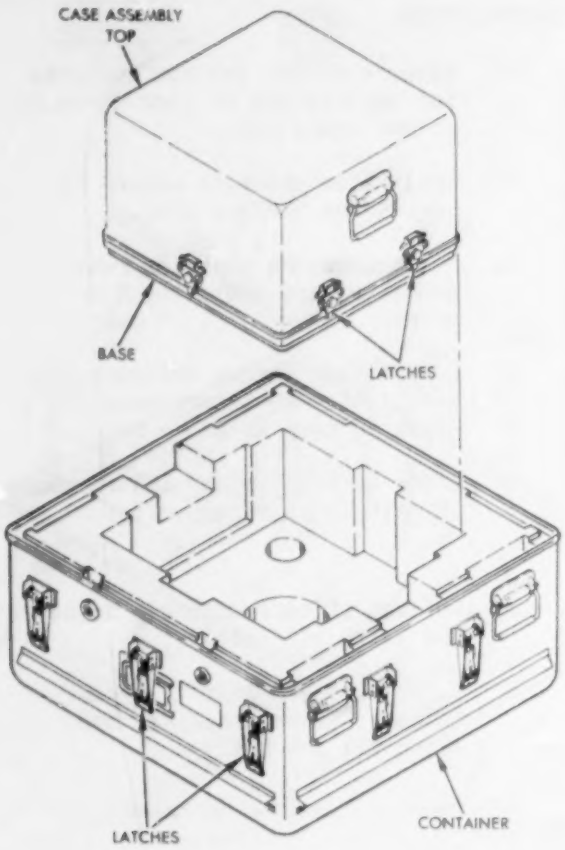
3-15. CASE AND CLAMP ASSEMBLY MAINTENANCE (cont)

b. Unlatch latches and open container.

c. Remove case assembly from container.

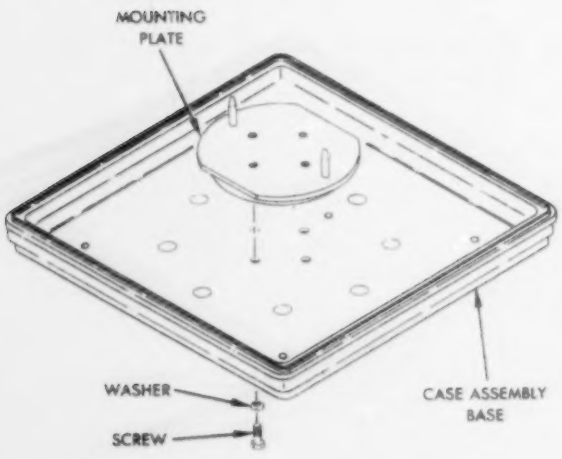
d. Unlatch latches on case assembly, remove top and set top aside.

e. Refer to step 1f above to remove clamp assembly.



f. Remove four screws and washers from bottom case assembly base.

g. Lift out mounting plate.



INSTALLATION

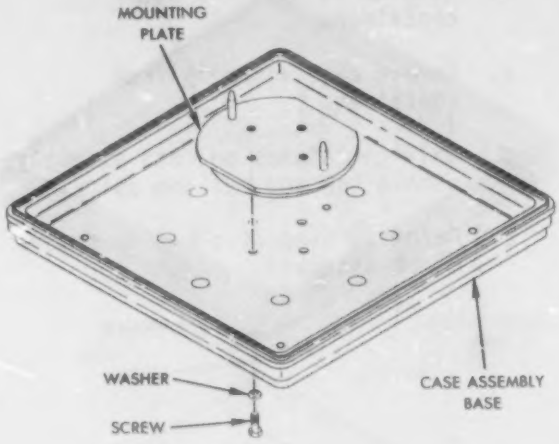
h. Prepare screws and surface area for application of zinc chromate primer (para 3-5).

i. Apply zinc chromate primer to screws and surface area.

j. Place mounting plate on case assembly base and aline four holes.

k. Insert four screws and washers and tighten to secure mounting plate to case assembly base.

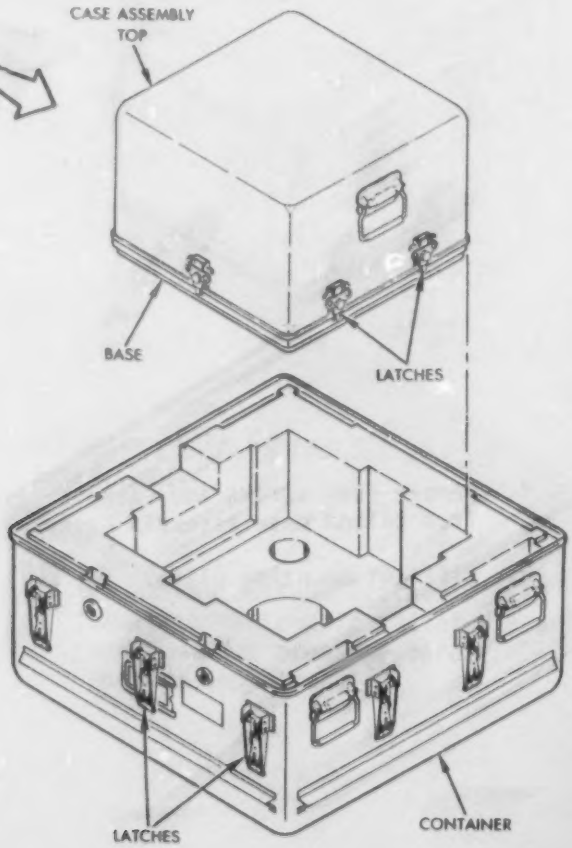
l. Refer to step 1s through 1v above to install clamp assembly.



m. Put top of case assembly on base and latch all latches.

n. Slide case assembly into container. Close container and latch all latches.

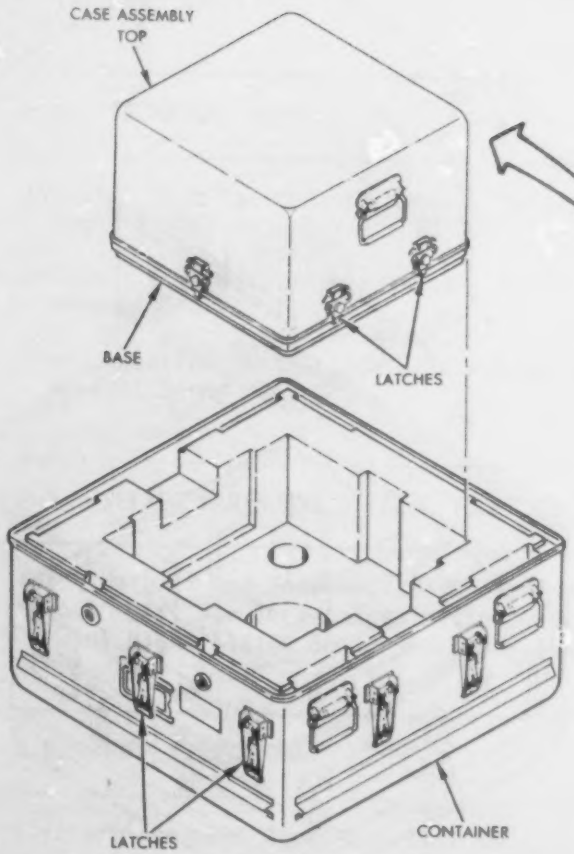
END OF TASK



3. RUBBER FOOT REPLACEMENT

REMOVAL

a. Press red button located in center of automatic relief valve and equalize pressure before opening container.



b. Unlatch latches and open container.

c. Remove case assembly from container.

d. Unlatch latches on case assembly, remove top, and set top aside.

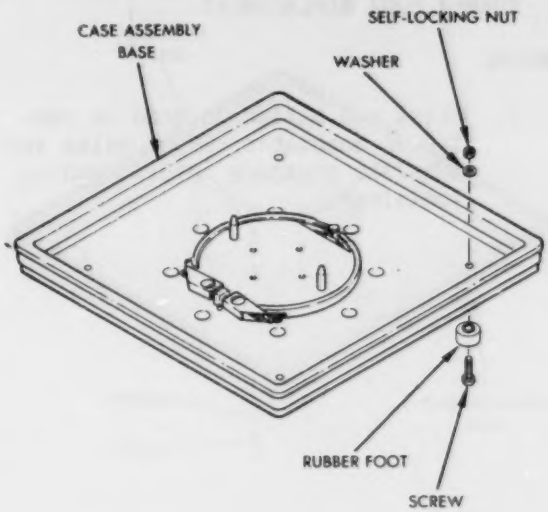
3-15. CASE AND CLAMP ASSEMBLY MAINTENANCE (cont) 3-15

NOTE

The following procedures are typical of all four feet.

e. Remove screw, rubber foot, and washer from case assembly base.

f. Remove and discard self-locking nut.



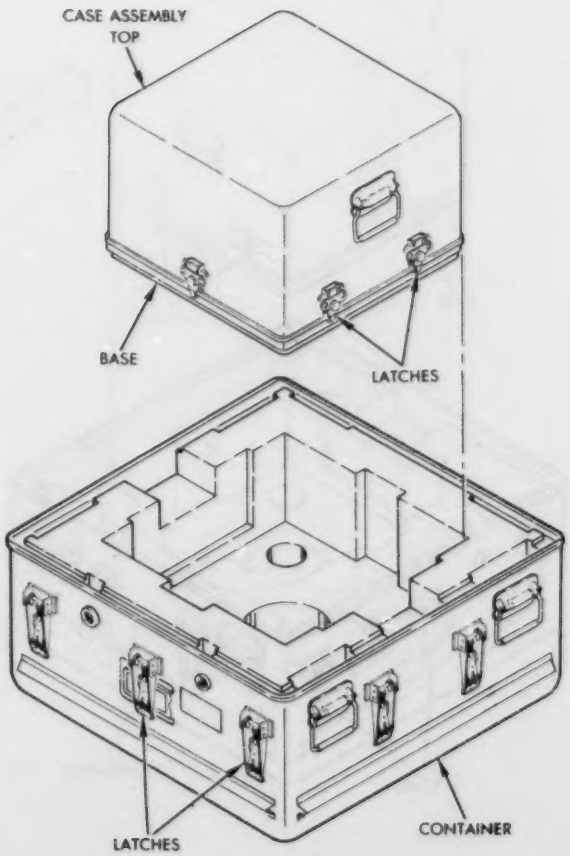
INSTALLATION

g. Aline rubber foot with hole in case assembly base, secure with screw, washer, and new self-locking nut.

h. Put top of case assembly on base and latch all latches.

i. Slide case assembly into container. Close container and latch all latches.

END OF TASK



TM 9-8145-476-23

APPENDIX A

REFERENCES

A-1. SCOPE A-1

This appendix lists all technical manuals, RPSTLs, supply catalogs, and general information referenced in this manual.

A-2. GENERAL INFORMATION A-2

The Army Maintenance Management System (TAMMS) . . . . . DA Pam 738-750

A-3. FIELD MANUALS A-3

Maintenance Quality Control and Technical Inspection Guide for Army Aircraft . . . . . FM 55-411

A-4. TECHNICAL MANUALS A-4

Aviation Unit Maintenance Manual, Target Acquisition Designation Sight (TADS) Assembly AN/ASQ 170 . . . . . TM 9-1270-476-20-1

Aviation Unit Maintenance Manual, Pilot Night Vision Sensor (PNVS) Assembly AN/AAQ-11 . . . . . .TM 11-5855-265-20-1

Procedures for Destruction of Electronics Material to Prevent Enemy Use . . . . . TM 750-244-2

A-5. REPAIR PARTS AND SPECIAL TOOLS LISTS A-5

Aviation Unit and Intermediate Maintenance Repair Parts and Special Tools List for Target Acquisition Designation Sight Assembly and Pilot Night Vision Sensor Assembly (TADS/PNVS) Containers . . . TM 9-8145-476-23P

A-6. SUPPLY CATALOGS A-6

Aircraft Armament Repairman Tool Set . . . . . SC 5180-95-CL-B09

Aircraft Armament Repairman Tool Set, Supplement . . . . . SC 5180-95-CL-B10

APPENDIX B

MAINTENANCE ALLOCATION CHART (MAC)

Section I. INTRODUCTION

B-1. GENERAL B-1

a. This section provides a general explanation of all maintenance and repair functions authorized at various maintenance categories.

b. The Maintenance Allocation Chart (MAC) in section II designates overall authority and responsibility for the performance of maintenance functions on the identified end item or component. The application of the maintenance functions to the end item or component will be consistent with the capacities and capabilities of the designated maintenance categories.

c. Section III lists the tools and test equipment (both special tools and common tool sets) required for each maintenance function as referenced from section II.

d. Section IV contains supplemental instructions and explanatory notes for a particular maintenance function.

B-2. MAINTANANCE FUNCTIONS B-2

Maintenance functions will be limited to and defined as follows:

a. Inspect. To determine the serviceability of an item by comparing its physical, mechanical, and/or electrical characteristics with established standards through examination (e.g., by sight, sound, or feel).

b. Test. To verify serviceability be measuring the mechanical, pneumatic, hydraulic, or electrical characteristics of an item and comparing those characteristics with prescribed standards.

c. Service. Operations required periodically to keep an item in proper operating condition, i.e., to clean (includes decontaminate, when required), to preserve, to drain, to paint, or to replenish fuel, lubricants, chemical fluids, or gases.

d. Adjust. To maintain or regulate, within prescribed limits, by bringing into proper or exact position, or by setting the operating characteristics to specified parameters.

e. Aline. To adjust specified variable elements of an item to bring about optimum or desired performance.

f. Calibrate. To determine and cause corrections to be made or to be adjusted on instruments or test, measuring, and diagnostic equipments used in precision measurement. Consists of comparisons of two instruments, one of which is a certified standard of known accuracy, to detect and adjust any discrepancy in the accuracy of the instrument being compared.

g. Remove/install. To remove and install the same item when required to perform service or other maintenance functions. Install may be the act of emplacing, seating, or fixing into position a spare, repair part, or module (component or assembly) in a manner to allow the proper functioning of an equipment or system.

h. Replace. To remove an unserviceable item and install a serviceable counterpart in its place. "Replace" is authorized by the MAC and is shown as the 3d position code of the SMR code.

i. Repair. The application of maintenance services[1], including fault location/troubleshooting[2], removal/installation, and disassembly/assembly[3] procedures, and maintenance actions[4], to identify troubles and restore serviceability to an item by correcting specific damage, fault, malfunction, or failure in a part, subassembly, module (compartment or assembly), end item, or system,

j. Overhaul. That maintenance effort (service/action) prescribed to restore an item to a completely serviceable/operational condition as required by maintenance standards in appropriate technical publications (i.e., DMWR). Overhaul is normally the highest degree of maintenance performed by the Army. Overhaul does not normally return an item to like new condition.

k. Rebuild. Consists of those services/actions necessary for the restoration of unserviceable equipment to a like new condition in accordance with original manufacturing standards. Rebuild is the highest degree of materiel maintenance applied to Army equipment. The rebuild operation includes the act of returning to zero those age measurements (hours/miles, etc.) considered in classifying Army equipment/components.

---

[1]Services - inspect, test, service, adjust, aline, calibrate, and/or replace.
[2]Fault locate/troubleshoot - The process of investigating and detecting the cause of equipment malfunctioning, the act of isolating a fault within a system or unit under test (UUT).
[3]Disassemble/assemble - encompasses the step-by-step taking apart (or breakdown) of a spare/functional group coded item to the level of its least componency identified as maintenance significant (i.e., assigned an SMR code) for the category of maintenance under consideration.
[4]Actions - welding, grinding, riveting, straightening, facing, remachinery, and/or resurfacing.

B-3. EXPLANATION OF COLUMNS IN THE MAC, SECTION II

a. Column 1, Group Number. Column 1 lists functional group code numbers, the purpose of which is to identify maintenance significant components, assemblies, subassemblies, and modules with the next higher assembly. End item group number shall be "00."

b. Column 2, Component/Assembly. Column 2 contains the names of components, assemblies, subassemblies, and modules for which maintenance is authorized.

c. Column 3, Maintenance Function. Column 3 lists the functions to be performed on the item listed in Column 2. (For detailed explanation of these functions, see paragraph B-2.)

d. Column 4, Maintenance Category, Column 4 specifies, by the listing of a work time figure in the appropriate subcolumn(s), the category of maintenance authorized to perform the function listed in Column 3. This figure represents the active time required to perform that maintenance function at the indicated category of maintenance. If the number or complexity of the tasks within the listed maintenance function vary at different maintenance categories, appropriate work time figures will be shown for each category. The work time figure represents the average time required to restore an item (assembly, subassembly, component, module, end item, or system) to a serviceable condition under typical field operating conditions. This time includes preparation time (including any necessary disassembly/assembly time), troubleshooting/fault location time, and quality assurance/quality control time in addition to the time required to perform the specific tasks identified for the maintenance functions authorized in the maintenance allocation chart. The symbol designations for the various maintenance categories are as follows:

AVUM, which corresponds to an O Code in the Repair Parts and Special Tools List (RPSTL)

AVIM, which corresponds to an F Code in the Repair Parts and Special Tools List (RPSTL).

DEPOT, which corresponds to a D Code in the Repair Parts and Special Tools List (RPSTL).

e. Column 5, Tools and Equipment. Column 5 specifies, by code, those common tool sets (not individual tools) and special tools, TMDE, and support equipment required to perform the designated function.

f. Column 6, Remarks. This column shall, when applicable, contain a letter code, in alphabetic order, which shall be keyed to the remarks contained in Section IV.

B-4. EXPLANATION OF COLUMNS IN TOOL AND TEST EQUIPMENT REQUIREMENTS, SECTION III B-4

a. Column 1, Reference Code. The tool and test equipment reference code correlates with a code used in the MAC, Section II, column 5.

b. Column 2, Maintenance Category. The lowest category of maintenance authorized to use the tool or test equipment.

c. Column 3, Nomenclature. Name or identification of the tool or test equipment.

d. Column 4, National Stock Number. The National stock number of the tool or test equipment.

e. Column 5, Tool Number. The manufacturer's part number.

B-5. EXPLANATION OF COLUMNS IN REMARKS, SECTION IV B-5

a. Column 1, Reference Code. The code recorded in column 6, Section II.

b. Column 2, Remarks. This column lists information pertinent to the maintenance function being performed as indicated in the MAC, Section II.

Section II. MAINTENANCE ALLOCATION CHART FOR TADS/PNVS SHIPPING AND STORAGE CONTAINERS

(1) GROUP NUMBERS	(2) COMPONENT/ASSEMBLY	(3) MAINTENANCE FUNCTION	(4) MAINTENANCE CATEGORY AVUM	AVIM	DEPOT	(5) TOOLS AND EQPT	(6) REMARKS
00	Shipping/Storage Container	Inspect	0.5			1,2,3,4	A
		Service	0.5	1.0		1,2	
		Repair		2.0			
	Cushion, Upper	Inspect	0.2				
		Service	0.2				
		Replace		0.2			
	Cushion, Lower	Inspect	0.2				
		Service	0.2				
		Replace		0.2			
	Identification Plate	Replace		0.1			
	Label	Inspect	0.1				
		Replace		0.2		3,4	
	Automatic Relief Valve	Inspect	0.2				
		Replace		0.3		1,2,3	
	Humidity Indicator	Inspect	0.1				
		Replace		0.3		1,2,3	
	Gasket	Inspect	0.2				
		Replace		0.5		1,2,3	
	Latch	Adjust	0.2				
	Case and Clamp Assembly	Inspect	0.2				
		Replace		0.1			
		Repair		1.2		1,2	
	Clamp Assembly	Inspect	0.1				
		Repair		0.5		1,2	
	Mounting Plate Assembly	Inspect	0.1				
		Replace		0.6		1,2	
	Rubber Feet	Inspect	0.1				
		Replace		0.1		1,2	

Section III. TOOL AND TEST EQUIPMENT REQUIREMENTS FOR TADS/PNVS SHIPPING AND STORAGE CONTAINERS

(1) Tool or Test Equipment Reference Code	(2) Maintenance Category	(3) Nomenclature	(4) National/NATO Stock Number	(5) Tool Number
1	O,F	Tool Kit, Aircraft Armament Repairman	4933-00-987-9816	SC 4933-95-CL-A13
2	O,F	Tool Kit, Aircraft Armament Repairman Supplemental	4933-00-994-9242	SC 4933-95-CL-A14
3	O,F	Goggles	4240-00-052-3776	-
4	O,F	Rubber Apron	8415-00-082-6108	-

Section IV. REMARKS

(1) Reference Code	(2) Remarks
A	Aviation Unit service limited to cleaning.

APPENDIX C

EXPENDABLE SUPPLIES AND MATERIALS LIST

SECTION I. INTRODUCTION

C-1. SCOPE

C-1

This appendix lists expendable supplies and materials you will need to maintain the shipping and storage containers. These items are authorized to you by CTA 50-970, expendable items (except medical, class V, repair parts, and heraldic items).

C-2. EXPLANATION OF COLUMNS

C-2

a. COLUMN 1 - ITEM NUMBER

This number is assigned to the entry in the listing and is referenced in the procedures to identify the material. Example: A Material/Parts list may show trichloroethane (item 25).

b. COLUMN 2 - LEVEL

This column identifies the lowest level of maintenance that requires the listed item.

O - Aviation Unit Maintenance

F - Aviation Intermediate Maintenance

c. COLUMN 3 - NATIONAL STOCK NUMBER

This is the national stock number assigned to the item; use it to order a new item.

d. COLUMN 4 - DESCRIPTION

Indicates the federal item name and, if required, a description to identify the item.

e. COLUMN 5 - UNIT OF MEASURE (U/M)

Indicates the measure used in performing the actual maintenance function. The measure is expressed by a two-letter alphabetical abbreviation such as ea for each, ft for foot, oz for ounce, in for inch, cc for cubic centimeter, pr for pair, and sh for sheet. If the unit measure is different from the unit of issue, order the lowest unit of issue that will do the job for you.

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
1	F	8040-00-145-0020	Adhesive, RTV, Grey, MIL-A-46146	oz
2	F	6810-00-753-4993	Alcohol, isopropyl, grade A, TT-I-735	oz
3	O	6810-00-825-3298	Bleach, liquid	oz
4	F	8020-00-264-3883	Brush, artist No. 9	ea
5	F	7520-00-223-8000	Brush, stencil, 1-inch diameter	ea
6	O	7920-00-205-3558	Cheesecloth pad, DDD-C-301	pg
7	O	7920-00-044-9281	Cloth, cotton wiping, CCC-C-46C	ea
8	F		Coating, polyurethane, green 383, 34094, MIL-C-46168	gl
9	F	8010-00-142-9279	Coating, primer, MIL-P-23377, type 1	qt
10	F	6850-00-619-7804	Desiccant bag, active, MIL-D-3464 type 2, size 4	
11	O	7930-00-985-6945	Detergent, mild, liquid, P-D-225	oz
12	F	8415-00-266-8675	Gloves, rubber, ZZ-G-381	pr
13	F	7510-00-233-0603	Ink, marking, indelible, black, TT-I-542	pt
14	O	7240-00-274-3875	Pail, galvanized, 3 gallon capacity	gl
15	O	8020-00-889-7920	Paint brush, flat, 1-inch	ea
16	F	5320-00-224-7201	Paper, abrasive, 400 grit, P-P-101E	sh
17	F	5350-00-224-7215	Paper, abrasive, 600 grit	sh
18	O	9920-00-292-9946	Pipe cleaner	pg
19	F	8010-00-616-9182	Primer (wash), pretreatment, formula No. 117 for metals, DOD-P-15328	pt
20	F	8010-00-835-2114	Primer, zinc chromate, TT-P-1757 yellow, Comp G	pt

Section II. EXPENDABLE SUPPLIES AND MATERIALS LIST (cont)

(1) Item Number	(2) Level	(3) National Stock Number	(4) Description	(5) U/M
21	F	9320-01-095-1759	Rubber strip, ZZ-R-765, class 3B, grade 60, 0.062 WT X 0.250DXO	ft
22	F	5310-00-536-6865	Self-locking nut, 52NTE-48	ea
23	F		Stencil set, alphanumeric, 0.50, 0.38, and 0.25-inch characters	ea
24	F	7510-00-290-2023	Tape, pressure sensitive (masking)	in
25	F	6810-00-664-0387	Trichloroethane, O-T-620, type 1	oz
26	F	6830-00-584-2957	Trichlorotrifluoroethane, technical, MIL-C-81302, type 2 (freon 113)	oz
27	F	8010-00-180-6343 OR 8010-00-161-7375	Varnish, oil, MIL-V-173	pt
28	F	6810-01-003-0262	Acetone, technical, O-A-51	oz
29	F	5320-00-721-8117	Paper, abrasive, 180 grit P-P-101	sh

GLOSSARY

Section I. ABBREVIATIONS

DSA	Day sensor assembly
HDD	Heads down display
ID	Identification
IVD	Indirect view display
LEU	Laser electronics unit
LRU	Line replaceable unit
LTR	Laser tracker receiver
LTU	Laser transceiver unit
MAC	Maintenance allocation chart
MTOE	Modified table of organization and equipment
NSA	Night sensor assembly
NSN	National stock number
ORC	Optical relay column
ORT	Optical relay tube
PMCS	Preventive maintenance checks and services
PNVS	Pilot night vision sensor assembly
QA/QC	Quality assurance/quality control
RPSTL	Repair parts and special tools list
SOP	Standard operating procedures
TAMMS	The army maintenance management system
TADS	Target acquisition designation sight
TEU	TADS electronic unit
TMDE	Test, measurement, and diagnostic equipment
U/M	Unit of measure

ALPHABETICAL INDEX

Subject, Para

A

Adhesive Label Replacement, 3-8

Adjustment, Latch, 2-8

Automatic Relief Valve Replacement, 3-11

C

Case and Clamp Assembly Cleaning, 2-7

Case and Clamp Assembly Maintenance, 3-15

Clamp Assembly Repair, 3-15

Common Tools and Equipment, 2-1, 3-1

Container:

- Cleaning, 2-7
- Exterior Cleaning, 2-7
- Latch Inspection, 2-8
- Latch Loosening, 2-8
- Latch Tightening, 2-8

Cushion:

- Cleaning, 2-7
- Replacement, 3-14

D

Desiccant Replacement, 3-13

Destruction of Army Materiel to Prevent Enemy Use, 1-3

Difference Between Models, 1-9

E

Equipment Characteristics, Capabilities, and Features, 1-8

Equipment Configuration, 1-12

Equipment Data, 1-10

Subject, Para

G

Gasket Replacement, 3-12

H

Humidity Indicator Replacement, 3-10

I

Identification (ID) Plate Replacement, 3-9

Inspection Container Latch, 2-8

L

Latch Adjustment, 2-8

Loosening, Container Latch, 2-8

M

Maintenance, Case and Clamp Assembly, 3-15

Maintenance Forms, Records, and Reports, 1-2

Major Stencil Repair, 3-7

Minor Stencil Repair, 3-7

Mounting Plate Replacement, 3-15

O

Official Nomenclature, Names, and Designations, 1-6

ALPHABETICAL INDEX (cont)

Subject, Para

P

Painting, Touchup, 3-6

PMCS Procedures, 2-5

Preparation for Storage and Shipment, 1-4

Preparation, Surface, 3-5

Q

Quality Assurance/Quality Control (QA/QC), 1-5

R

Repair, Clamp Assembly, 3-15

Repair Parts, 2-3, 3-3

Repair, Stencil, 3-7

- Major, 3-7
- Minor, 3-7

Replacement:

- Adhesive Label, 3-8
- Automatic Relief Valve, 3-11
- Cushion, 3-14
- Desiccant, 3-13
- Gasket, 3-12
- Humidity Indicator, 3-10
- Identification (ID) Plate, 3-9
- Mounting Plate, 3-15
- Rubber Foot, 3-15

Reporting Equipment Improvement Recommendations (EIR), 1-7

Rubber Foot Replacement, 3-15

Subject, Para

S

Safety, Care, and Handling, 1-11

Scope, 1-1

Special Tools, TMDE, and Support Equipment, 2-2, 3-2

Stencil Repair, 3-7

- Major, 3-7
- Minor, 3-7

Surface Preparation, 3-5

T

Tightening, Container Latch, 2-8

Touchup Painting, 3-6

By Order of the Secretary of the Army:

JOHN A. WICKHAM, JR.
General, United States Army
Chief of Staff

Official:

DONALD J. DELANDRO
Brigadier General, United States Army
The Adjutant General

Distribution:

To be distributed in accordance with DA Form 12-32, Organizational, Direct Support, and General Support Maintenance for the Target Acquistion Designation Sight (TADS) (AH-64 Attack Helicopter)

☆U.S. GOVERNMENT PRINTING OFFICE : 1989 - 242-894 (07123)

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

THEN. . JOT DOWN THE DOPE ABOUT IT ON THIS FORM, CAREFULLY TEAR IT OUT, FOLD IT AND DROP IT IN THE MAIL!

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)
CDR, 1st Bn, 65th ADA
ATTN: SP4 John Doe
Key West, FL 33040

DATE SENT
14 January 1979

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE
TM 9-1430-550-34-1	7 Sep 72	Unit of Radar Set AN/MPQ-50 Tested at the HFC

BE EXACT. PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO
9-19		9-5	
21-2	step 1C		21-2

SAMPLE

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

"B" Ready Relay K11 is shown with two #9 contacts. That contact which is wired to pin 8 of relay K16 should be changed to contact #10.

Reads: Multimeter B indicates 600 K ohms to 9000 K ohms.

Change to read: Multimeter B indicates 600 K ohms minimum.

Reason: Circuit being checked could measure infinity. Multimeter can read above 9000 K ohms and still be correct.

NOTE TO THE READER:

Your comments will go directly to the writer responsible for this manual, and he will prepare the reply that is returned to you. To help him in his evaluation of your recommendations, please explain the reason for each of your recommendations, unless the reason is obvious.

All comments will be appreciated, and will be given immediate attention. Handwritten comments are acceptable.

For your convenience, blank "tear out" forms, preprinted, addressed, and ready to mail, are included in this manual.

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER	SIGN HERE
SP4 John Doe, Autovon 222-222	

DA FORM 1 JUL 79 2028-2 PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE

BE EXACT . . PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME GRADE OR TITLE AND TELEPHONE NUMBER

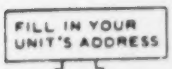
SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

REVERSE OF DA FORM 2028-2



FOLD BACK

DEPARTMENT OF THE ARMY

Commander
U.S. Army Missile Command
ATTN: AMSMI-SNPM
Redstone Arsenal, AL 35898-5238

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE

BE EXACT. . .PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

TEAR ALONG PERFORATED LINE

REVERSE OF DA FORM 2028-2

FILL IN YOUR UNIT'S ADDRESS

FOLD BACK

DEPARTMENT OF THE ARMY

_____

_____

Commander
U.S. Army Missile Command
ATTN: AMSMI-SNPM
Redstone Arsenal, AL 35898-5238

TEAR ALONG PERFORATED LINE

RECOMMENDED CHANGES TO EQUIPMENT TECHNICAL PUBLICATIONS

SOMETHING WRONG WITH THIS PUBLICATION?

FROM: (PRINT YOUR UNIT'S COMPLETE ADDRESS)

DATE SENT

PUBLICATION NUMBER	PUBLICATION DATE	PUBLICATION TITLE

BE EXACT. . . PIN-POINT WHERE IT IS

PAGE NO	PARA-GRAPH	FIGURE NO	TABLE NO

IN THIS SPACE TELL WHAT IS WRONG AND WHAT SHOULD BE DONE ABOUT IT:

PRINTED NAME, GRADE OR TITLE, AND TELEPHONE NUMBER

SIGN HERE

DA FORM 1 JUL 79 2028-2

PREVIOUS EDITIONS ARE OBSOLETE.

P.S.--IF YOUR OUTFIT WANTS TO KNOW ABOUT YOUR RECOMMENDATION MAKE A CARBON COPY OF THIS AND GIVE IT TO YOUR HEADQUARTERS

best copy available

REVERSE OF DA FORM 2028-2

FILL IN YOUR UNIT'S ADDRESS

FOLD BACK

TEAR ALONG PERFORATED LINE

DEPARTMENT OF THE ARMY

Commander
U.S. Army Missile Command
ATTN: AMSMI-SNPM
Redstone Arsenal, AL 35898-5239

PIN: 057771-000